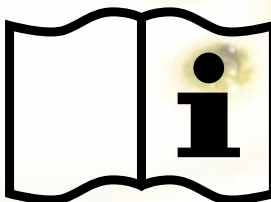


CT PROformance™ Step-by-Step Procedures

COMBITHERM®

CTP6-10E CTP6-10G
CTP10-10E CTP10-10G
CTP7-20E CTP7-20G
CTP10-20E CTP10-20G
CTP20-10E, CTP20-10G
CTP20-20E, CTP20-20G



Consult instructions
for operation and use.

DANGER



DO NOT store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

DANGER



IMPROPER INSTALLATION, ALTERATION, ADJUSTMENT, SERVICE, OR MAINTENANCE COULD RESULT IN SEVERE INJURY, DEATH, OR CAUSE PROPERTY DAMAGE.
READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

INTRODUCTION	1
SAFETY PRECAUTIONS	2
PROTOUCH™ CONTROL INSTRUCTIONS	
Start-Up Procedures	4
Home Screen	5
Utility Screen	5
Upload/Download Screen	5
Software Updates	6
Settings Screen	7
Preventative Maintenance Screen	8
Cooking Screen	9
Auxiliary Functions	
Multiple Power Settings	10
Multiple Fan Speeds	10
Multi-Shelf Timer	10
Oven Preheat	11
Oven Cool-Down	11
Humidity Control	12
Factory Default Settings	13
Operation Modes	
Steam	14
Combination	16
Convection	18
Retherm	20
Core Temperature - Delta-T	22
Probe Calibration	22
CombiSmoker® Procedures	23
Recipe Programming	
Recipe Programming	25
Using Programmed Recipes	26
Editing Programmed Recipes	27
Organizing Programmed Recipes	28
HACCP Access and Download	30
CombiHood PLUS™	32
Automatic Grease Collection	34
Automatic Liquid Cleaning	35
RECIPES	
Bakery Recipes	36
Convenience Product Recipes	38
Fish & Seafood Recipes	40
Meat Recipes	41
Miscellaneous Recipes	43
Poultry Recipes	44
Vegetable Recipes	46

CLEANING & MAINTENANCE

Mobile Equipment Restraint	48
Cleaning Agents	49
Precautions	49
First Aid	49
Preventative Maintenance	50
Protecting Stainless Steel Surfaces	51
Daily Gasket Cleaning	52
Probe Usage and Cleaning	52
Daily Oven Cleaning	52
Trolley/Roll-in Cart Cleaning	52
Monthly Cleaning	52
PROtouch with CombiClean®	53


TROUBLE SHOOTING

Error Codes	54
-------------	----

WARRANTY & TRANSPORTATION

Original Equipment Limited Warranty	61
Transportation Damage & Claims	62

Please post the following instructions in a prominent location in the event the user smells gas.

<h1>DANGER</h1>	
	<p>BEFORE STARTING THE APPLIANCE, MAKE CERTAIN YOU DO NOT DETECT THE ODOR OF GAS.</p> <p>IF THE ODOR OF GAS IS DETECTED:</p> <ul style="list-style-type: none"> • DO NOT attempt to light any appliance. • DO NOT touch any electrical switches. • Extinguish any open flame. • Use a telephone OUTSIDE THE PROPERTY & IMMEDIATELY contact your gas supplier. • If unable to contact your gas supplier, contact the fire department.

W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls , Wisconsin 53052-0450 • U.S.A.

PHONE: 262.251.3800 • 800.558-8744 USA/CANADA

FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY

www.alto-shaam.com

INTRODUCTION

ECOSMART® TECHNOLOGY



The Alto-Shaam Combitherm combination oven/steamer employs Ecosmart operating efficiencies in the design and application of all operating and programming functions. Ecosmart operational characteristics include the use of a water barrier to close the oven compartment to the outside air. While maintaining a non-pressurized atmosphere, the primary purpose of the Ecosmart system is to prevent the steam and heat generated within the oven compartment from freely escaping to the outside.

The Ecosmart design displaces the air within the cooking compartment and achieves a higher level of steam saturation that offers quick-steaming at temperatures above 212°F (100°C).

This guide is provided as an operational aid with step-by-step instructions of the basic functions of the Combitherm oven, along with the many other additional features of the control.

PROTOUCH™ CONTROL

The Combitherm PROtouch control features a simple, graphics-based control panel that commands all the oven functions. Access your titled recipes. Manual cooking by time and temperature also are easily accomplished.

Intuitive interface - The Alto-Shaam PROtouch offers a simple interface that commands all of the Combitherm's cooking functions. As the name implies, it is fully operable by touch.

Graphic controls - The highly visual graphic-based control with logical procedures ensure that correct steps are followed every time.

An excellent memory - Access an unlimited number of programmed titled recipes that you've customized. Each recipe can have up to 10 sequential steps.

HACCP data access - CT PROformance™ ovens include a downloadable HACCP function.

Absolute Humidity Control™ - provides 0-100% humidity levels allowing more control over the ideal cooking environment and product finish [PATENT PENDING].

Powerful tool - The PROtouch control plays an important part in our continuous improvement process. New features and abilities can be loaded to your oven as they become available. Simply call our Service Department for assistance.

Superior baking - The five-speed fan provides consistent baking results. A moisture injection feature provides perfect sheen and crust on breads and pastry items.

Multi-shelf timers - Track cooking time of different food items in the same oven with multi-shelf timers. Time is tracked in minutes and seconds.

On-board diagnostics - The PROtouch control includes on-board diagnostic functionality with results displayed right on the touch screen.

Two power levels: reduced power to manage kitchen power peaks, and eco power for optimal oven efficiency.

PROpower™ power level option - an accelerated turbo power for an instant boost of heat or quick heat recovery [patent pending].

Multiple languages: software operation in English, French, German, Korean, Mandarin, Russian, or Spanish.



STEAM MODE



COMBINATION MODE



CONVECTION MODE



RE THERM MODE

SAFETY PROCEDURES AND PRECAUTIONS

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols may be used throughout this manual.

DANGER



Used to indicate the presence of a hazard that **WILL** cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.

WARNING



Used to indicate the presence of a hazard that **CAN** cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.

CAUTION



Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.

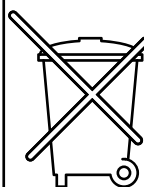
CAUTION

Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.

NOTE: Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.

1. This appliance is intended to cook, hold or process foods for the purpose of human consumption. No other use for this appliance is authorized or recommended.
2. This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

NOTE



For equipment delivered for use in any location regulated by the following directive:

DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.



Used to indicate that referral to operating instructions is a mandatory action. If not followed the operator could suffer personal injury.



Used to indicate that referral to operating instructions is recommended to understand operation of equipment.

CAUTION



CHILDREN MUST BE SUPERVISED AT ALL TIMES WHILE IN THE PRESENCE OF THIS APPLIANCE AND NOT ALLOWED TO PLAY WITH OR OPERATE THE OVEN.

INTRODUCTION

IMPORTANT SAFETY PRECAUTIONS

NOTE: Automatic steam venting is a standard safety feature built into all Combitherm oven models. This feature vents all steam from the oven compartment immediately before cooking time expires or set probe temperature is reached.

Automatic steam venting does not function if the oven door is opened before time expires or when the oven has been set to continuous operation.

NOTE: Use authorized Combitherm oven cleaner only. Unauthorized cleaning agents may discolor or harm interior surfaces of the oven. Read and understand label and material safety data sheet before using the oven cleaner.

FOR OPERATOR SAFETY

NOTE AND OBSERVE ALL SAFETY PRECAUTIONS LOCATED THROUGHOUT THIS GUIDE



WARNING

HOT STEAM CAUSES BURNS

ROTATE THE DOOR HANDLE TO RELEASE THE DOOR LATCH. WAIT UNTIL THE STEAM IS VENTED BEFORE FULLY OPENING THE DOOR.

CAUTION



METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

CAUTION



MAKE CERTAIN THE AREA AROUND THE APPLIANCE IS KEPT CLEAR OF COMBUSTIBLE ITEMS.

CAUTION



To prevent malfunction or cause negative back draft, DO NOT obstruct exhaust flues or attach any flue extension that will impede proper burner operation.



WARNING

DO NOT HANDLE PANS CONTAINING LIQUID OR SEMILIQUID PRODUCTS POSITIONED ABOVE THE EYE LEVEL OF THE OPERATOR. SUCH PRODUCTS CAN SCALD AND CAUSE SERIOUS INJURY.

DANGER



AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.



SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED



CAUTION

DO NOT USE THE ATTACHED HAND-HELD HOSE TO SPRAY ANYTHING OTHER THAN THE INTERIOR OF THE COMBITHERM OVEN COMPARTMENT.

DO NOT USE THE SPRAY HOSE ON THE SURFACE OF A HOT COOKING COMPARTMENT. ALLOW THE OVEN TO COOL TO A MINIMUM OF 150°F (66°C).

OPERATING INSTRUCTIONS

CT PROFORMANCE™ START-UP PROCEDURES



Power ON - Activates power to the oven and automatically fills the steam generator equipped models with water that will heat to a stand-by mode temperature of 188°F (77°C).



Power OFF - Press once to initiate power shut down sequence to the oven. **Note:** Oven will not shut down during a cooking cycle. You may need to press firmly due to the material thickness. From time to time, the control may become unresponsive. **ONLY** in this case, firmly press and hold the OFF key for 10 seconds to power down the oven.



When the oven is powered on, the PROtouch screen illuminates. "Loading" indicates that the software is booting up. The screen will also indicate what level of progress has been made as the software becomes fully operational. See illustration at left.

If, for any reason, the oven is turned off or loses power during this start-up process, the operator will be prompted to calibrate the Touch screen when the oven is next powered up.



Return to Home Screen - Press the red arrow if the PROtouch™ screen *does not* need to be calibrated.



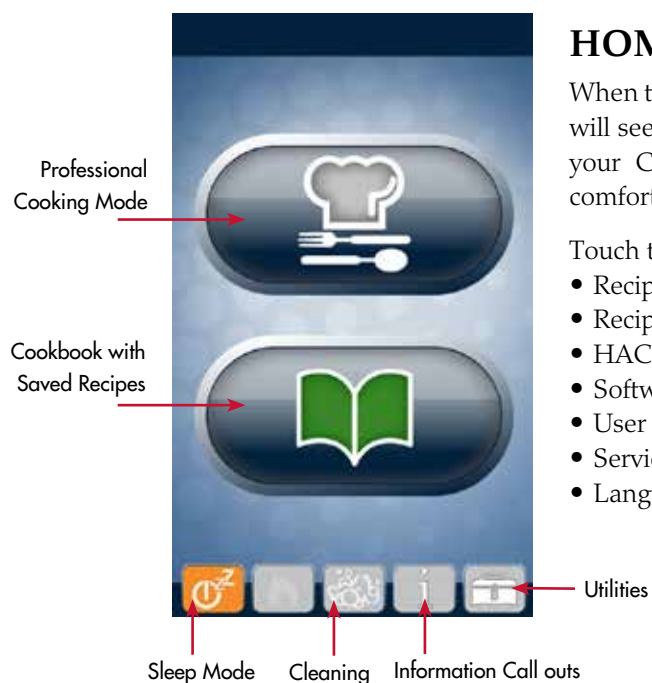
Begin Calibration Process - Press the green check mark if the Touch screen *does* need to be calibrated. The screen will switch to a grey background. See illustration at right. A crosshairs icon will appear. The operator should touch the center intersection using a stylus for an accurate calibration. This prompt and required action will be repeated several times in different areas of the Touch screen. When complete, the operator will be returned to the Home screen.



NOTE: In the event of a power failure, the oven will not operate.

OPERATING INSTRUCTIONS

CONTROL PANEL IDENTIFICATION



HOME SCREEN

When the oven finishes powering up, this is the screen you will see. As a first time user, you may want to personalize your CombiOven to reflect the settings you are most comfortable with.

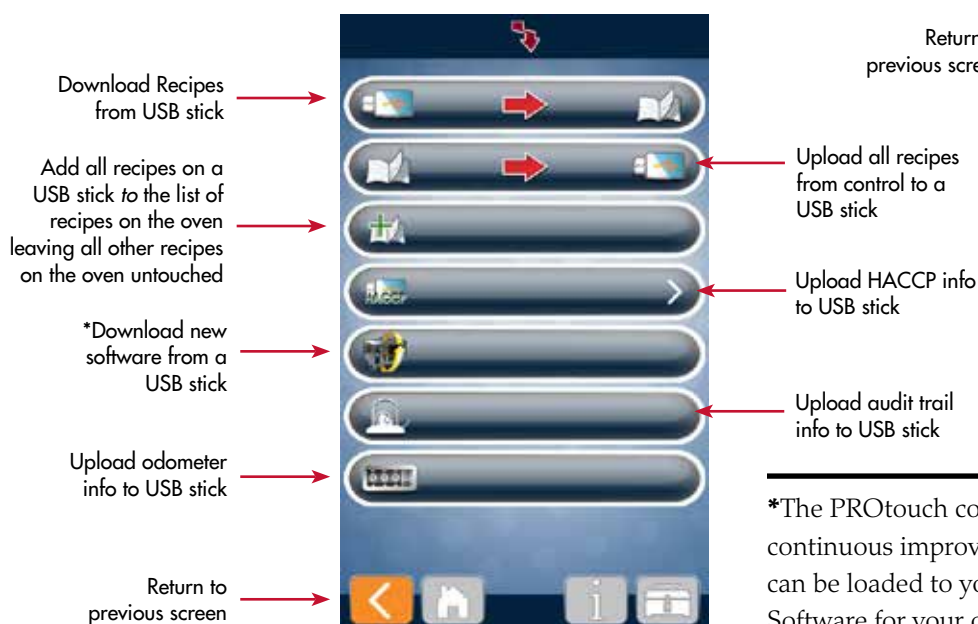
Touch the **Utilities** icon to access:

- Recipe uploads
- Recipe downloads
- HACCP downloads
- Software updates
- User setting
- Service mode
- Language choice

UTILITY SCREEN



UPLOAD/DOWNLOAD SCREEN



*The PROtouch control plays an important part in our continuous improvement process. New features and abilities can be loaded to your oven as they become available. Software for your oven can be accessed from the Alto-Shaam website, under the Downloads tab.

OPERATING INSTRUCTIONS

SOFTWARE UPDATES

The PROtouch control plays an important part in our continuous improvement process. New features and abilities can be loaded to your oven as they become available. Software for your oven can be accessed from the Alto-Shaam website, under the Downloads tab. <http://www.alto-shaam.com/downloads.aspx>

Use a USB stick to copy the PROtouch software from the website to the USB stick.



PRESS ON BUTTON TO POWER OVEN ON.



TOUCH THE UTILITIES ICON.



TOUCH THE DOWNLOAD ICON.



TOUCH THE DOWNLOAD NEW SOFTWARE ICON.

Most software updates will require the full oven update as shown below. Additional options are available in the event a special need arises. Call our Service Department for assistance with these special circumstances.

REMOVE THE CAP OF THE USB PORT ON THE OVEN.

INSERT THE USB STICK. If the USB stick is not recognized by the Combitherm, a question mark will appear on screen. Try again with another flash drive device or call Alto-Shaam Service.

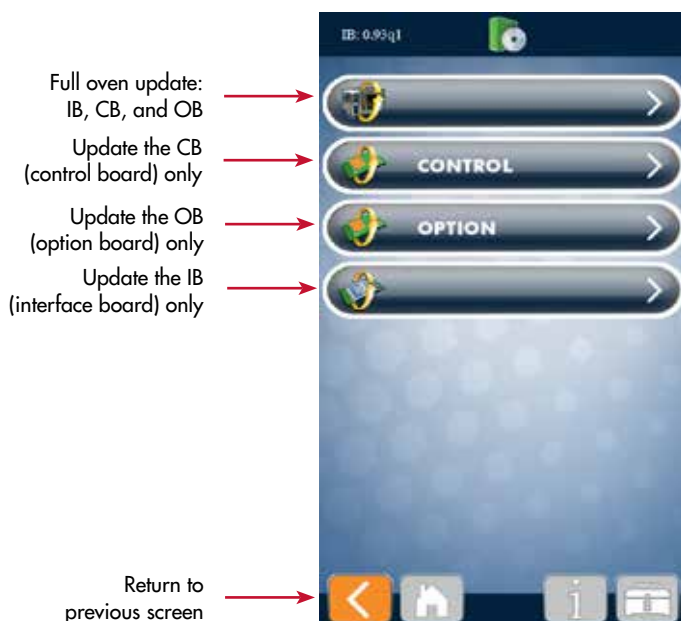
When the data has made a successful transfer to the UB drive, the screen will change. See below.



TOUCH THE GREEN CHECK MARK KEY TO COMPLETE THE PROCESS.

Remove the USB stick and replace the cap on the USB port on the oven.

SOFTWARE UPLOAD SCREEN

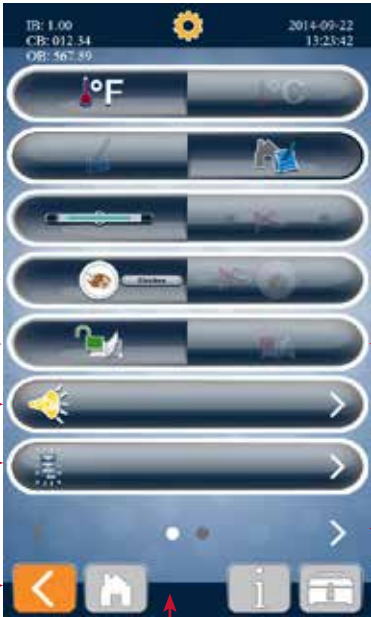


Note: After the software update has been completed, the oven may automatically initiate a shut down and reboot sequence if required.

OPERATING INSTRUCTIONS

CONTROL PANEL IDENTIFICATION

SETTINGS SCREEN 1



The screenshot shows the Settings Screen 1 interface. At the top, it displays 'TB: 1.00', 'CB: 012.34', 'OB: 567.89', a gear icon, and the date/time '2014-09-22 13:23:42'. The screen contains several settings, each with a vibrant icon and a faded alternate choice. Red arrows point from text labels to the corresponding settings. At the bottom, there are navigation icons: a back arrow, a home icon, an information icon, and a forward arrow. A red arrow points from the text 'Screen 1 of 2' to the information icon.

Fahrenheit /Celsius →

Keep last user setting →

Handle LED on →

Recipe display names on →

Unlock recipes →

Beeper volume & alarm clips →

Screen brightness →

Return to previous screen →

Use factory default settings →

Handle LED off →

Recipe display names off →

Lock recipes →


Advance to next setting screen →

Note: A password is required to lock and unlock the recipes. Simply call an Alto-Shaam Culinary Chef for assistance.

Note: When a setting has been selected, the graphic will be vibrant in color while the alternate choice will appear faded and gray. In the illustration above, Fahrenheit, factory default setting, handle LED on, recipe display with text, and recipes are not locked have been chosen.

Screen 1 of 2

SETTINGS SCREEN 2



The screenshot shows the Settings Screen 2 interface. At the top, it displays 'TB: 1.00', 'CB: 012.34', 'OB: 567.89', a gear icon, and the date/time '2014-09-22 13:27:26'. The screen contains several settings, each with a vibrant icon and a faded alternate choice. Red arrows point from text labels to the corresponding settings. At the bottom, there are navigation icons: a back arrow, a home icon, an information icon, and a forward arrow. A red arrow points from the text 'Screen 2 of 2' to the information icon.

Language Choices →

Date/Time →

Future Feature (not yet available) →

Calibrate product probe →

Preventative Maintenance Actions →

Run diagnostics →

Force Boiler Flush →

Return to previous setting screen →

Return to utility screen →

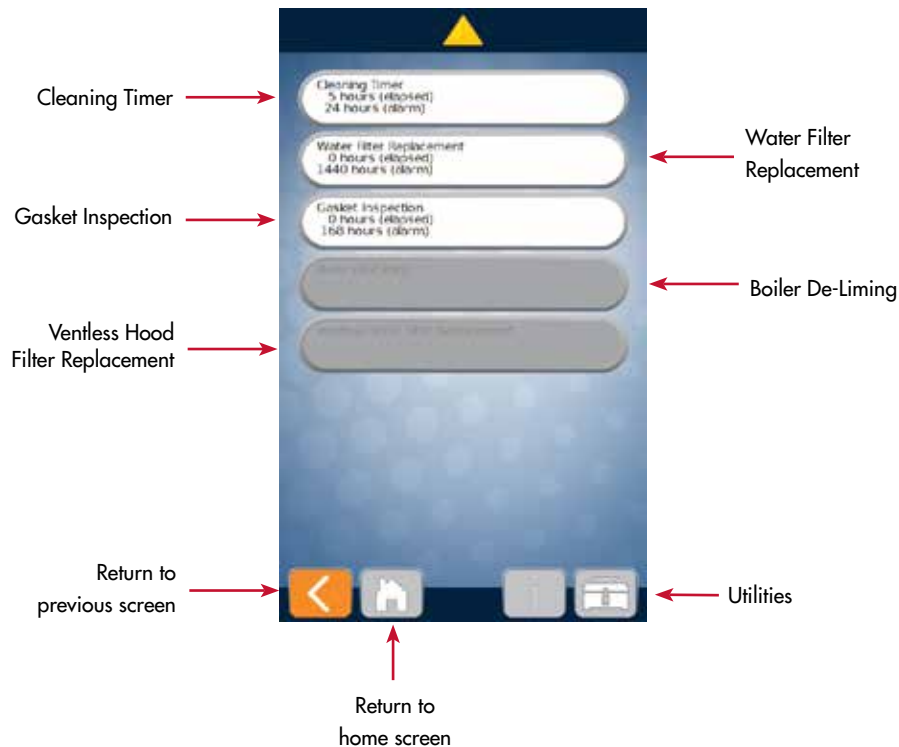
Languages available: English, French, German, Korean, Mandarin, Russian, or Spanish.

Screen 2 of 2

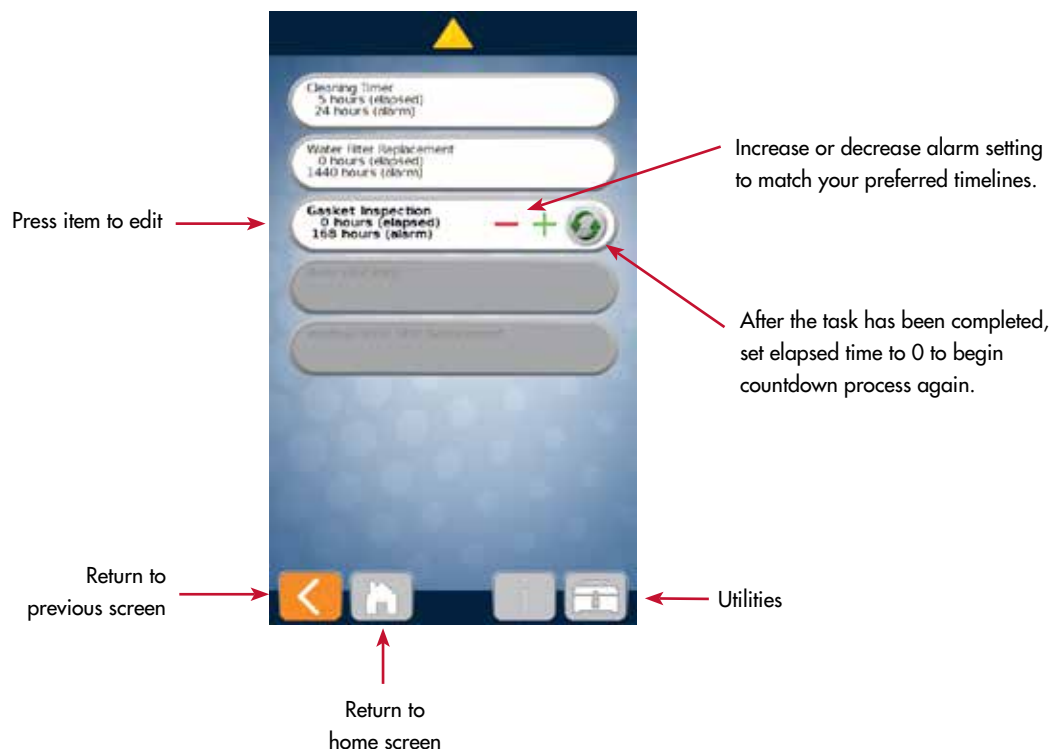
OPERATING INSTRUCTIONS

CONTROL PANEL IDENTIFICATION

PREVENTATIVE MAINTENANCE SCREEN

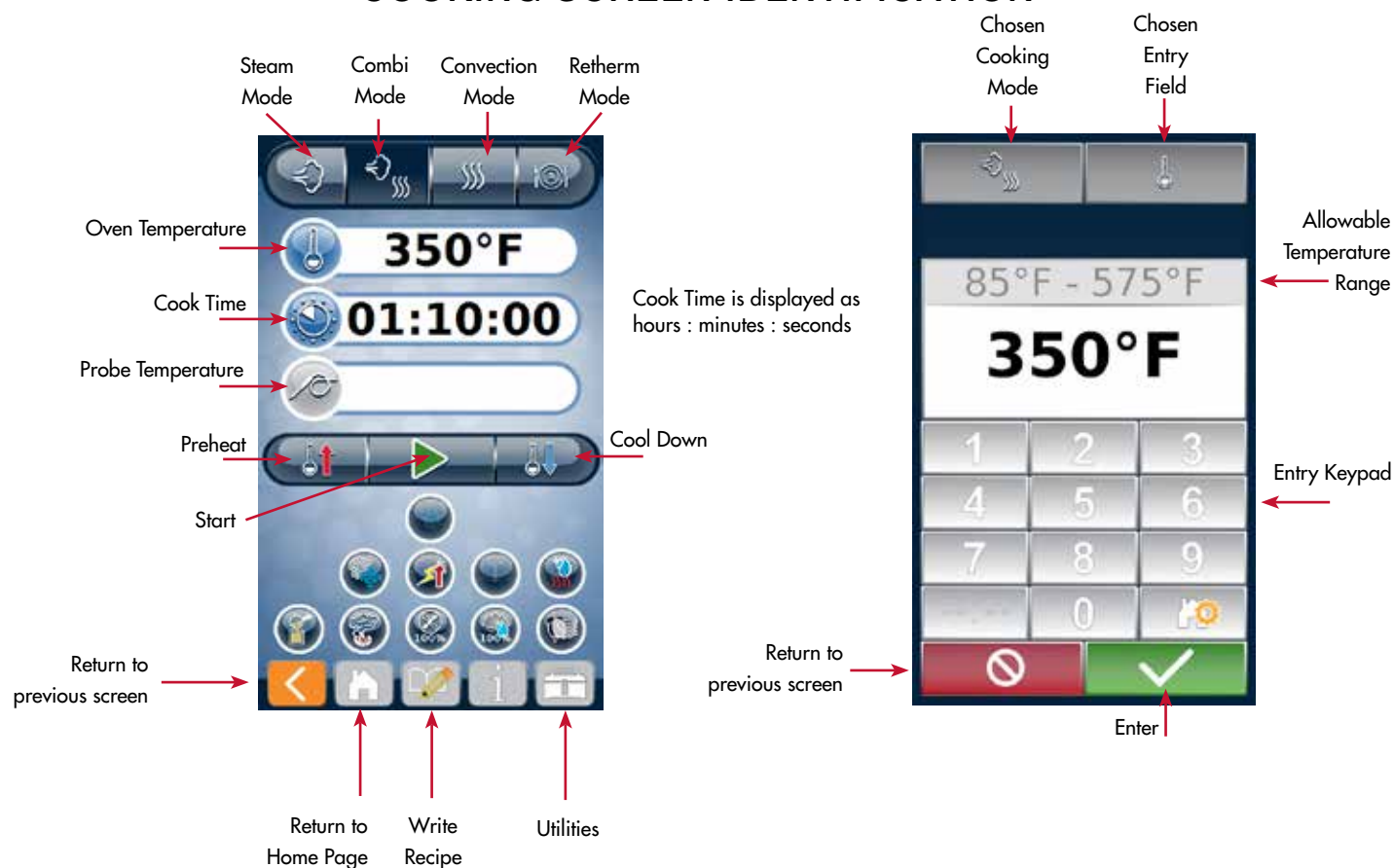


PREVENTATIVE MAINTENANCE - EDITING



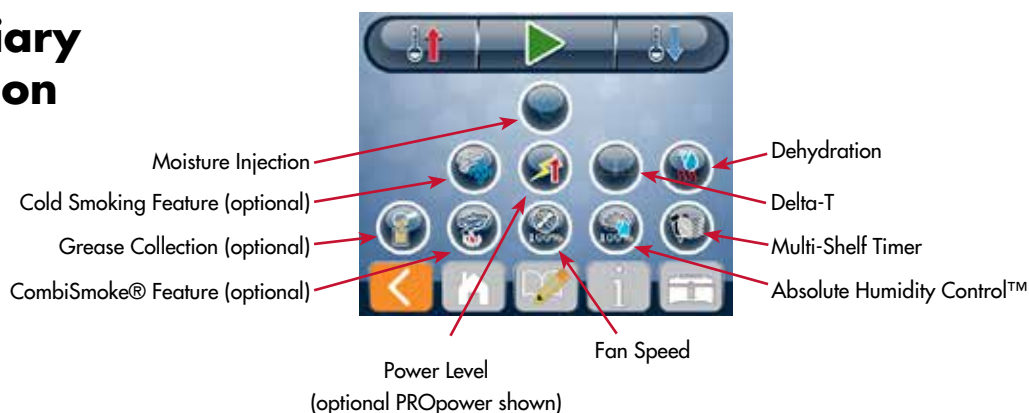
OPERATING INSTRUCTIONS

COOKING SCREEN IDENTIFICATION



Note: When a cooking mode has been selected, it will appear darker blue. When the cooking mode is calling for heat, it will appear red. When the cooking mode is calling for moisture, it will appear light blue. In the illustration above, Combi Mode has been chosen and is calling for heat. Also, the PROpower™ level has been chosen, and the fan speed has been set at 100%.

Auxiliary Function Icons



OPERATING INSTRUCTIONS

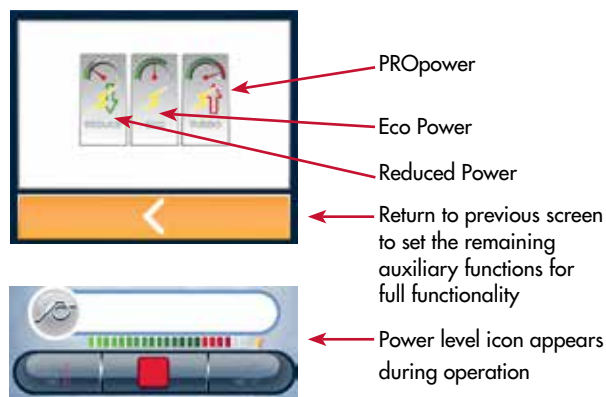
AUXILIARY FUNCTIONS

POWER SETTINGS

Two power levels: reduced power to manage kitchen power peaks, and eco power for optimal oven efficiency.

A third choice is optional on electric models, but standard on gas models. PROpower™ is an accelerated turbo power for an instant boost of heat or quick heat recovery [PATENT PENDING].

NOTE: Reduced power will result in longer cooking times and PROpower will decrease your cooking time by several minutes.

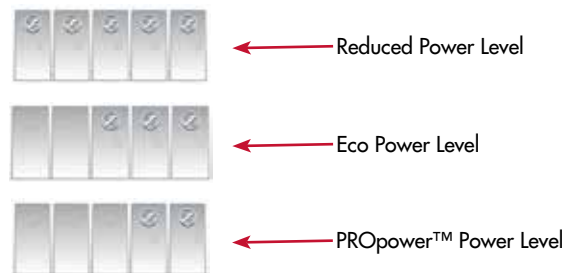


MULTIPLE FAN SPEEDS

The PROtouch™ control includes five different fan speeds. The reduced fan speed function is useful for flow-sensitive products such as soufflés and meringues, or any products affected by a high velocity of air movement.

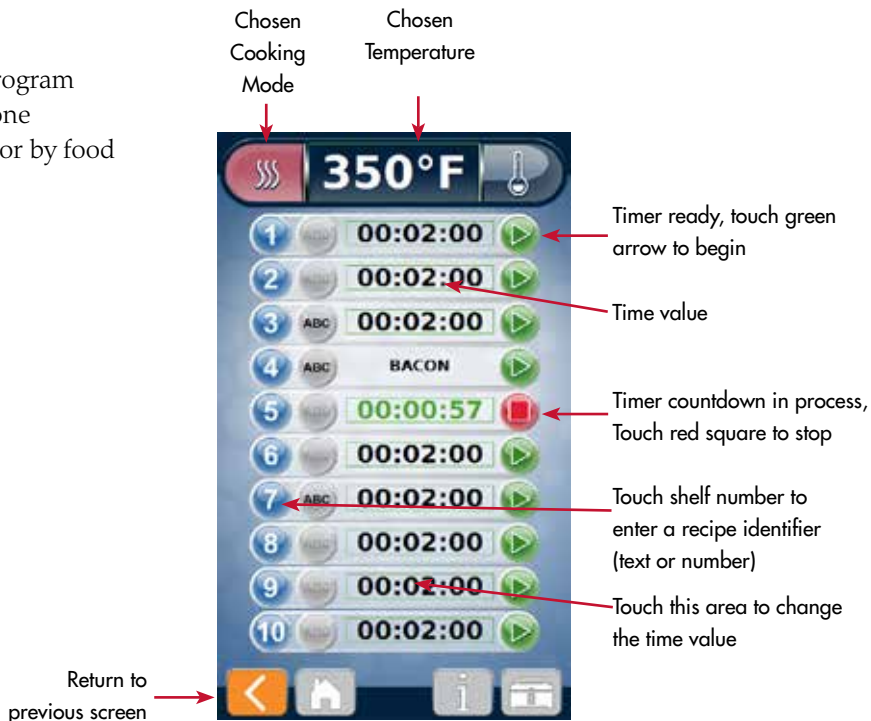
NOTE: Fan speed choices are based upon the power level you have chosen.

Fan speed choices



MULTI-SHELF TIMER

The multi-shelf timer allows the operator to program alarm times for the oven shelves. This can be one common time for corresponding oven shelves or by food item that is cooking.



OPERATING INSTRUCTIONS

AUXILIARY FUNCTIONS AND FEATURES

PREHEAT FEATURE

The oven should be preheated before most cooking functions. When cooking full loads, use a temperature 50°F (10°C) greater than the cook temperature in order to recover from heat loss when the door is opened to add food to the oven. For items that use the **Steam** mode, it is necessary to use a preheat temperature lower than the cook temperature in order to create the proper amount of steam.



PRESS ON BUTTON TO POWER OVEN ON.



TOUCH THE PREHEAT ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO START THE PREHEAT.



COOL DOWN FEATURE

The cool-down feature provides the operator with the ability to lower the temperature of the oven compartment at an accelerated pace. This function is useful when it is necessary to immediately change from a high temperature cooking function to a lower temperature function or to the steam program. This function is also useful to help cool the oven compartment in preparation for cleaning.

TIP: Always allow the oven walls to cool to a minimum of 140°F (60°C) before spraying the compartment with oven cleaner.

OPEN OVEN DOOR.



TOUCH THE COOL DOWN ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO BEGIN THE COOL DOWN.

THE TARGET OVEN TEMPERATURE CHOSEN WILL APPEAR JUST ABOVE THE RED STOP BUTTON.

THE CURRENT OVEN TEMPERATURE WILL APPEAR AT THE TOP OF THE SCREEN.



OPERATING INSTRUCTIONS

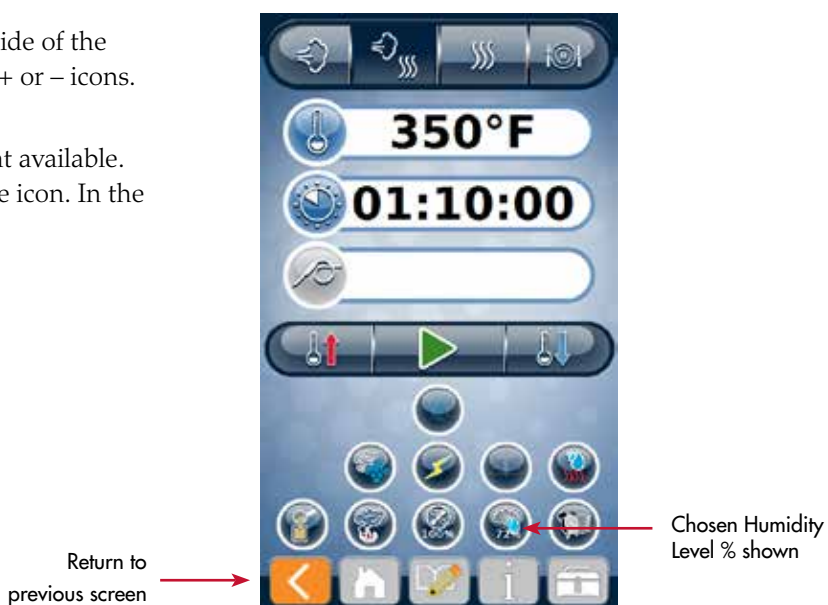
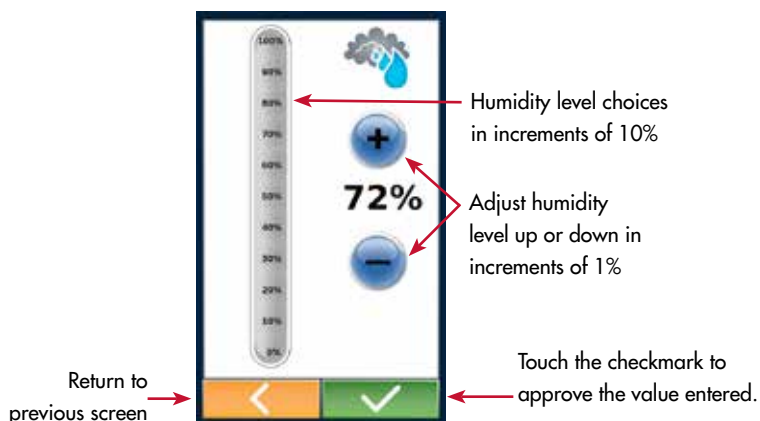
AUXILIARY FUNCTIONS AND FEATURES

HUMIDITY CONTROL FEATURE

The humidity control feature is an automatic function designed to regulate humidity to provide additional color to food as needed. This feature is particularly useful for adding color to high moisture products such as chicken and other poultry, or for additional browning of full loads and other moist products. In addition, this feature may be used to add texture to fried items such as french fries or breaded chicken. Humidity control can be used in any cooking mode and can be programmed into a cooking procedure.





Touch the nearest 10% increment on the left side of the screen, and then adjust up or down using the + or – icons.

0% humidity is the driest cooking environment available. The percentage level chosen will appear on the icon. In the illustration at right, 72% is shown.



OPERATING INSTRUCTIONS

CT PROFORMANCE™ FACTORY DEFAULT SETTINGS

COOKING MODE		OVEN TEMPERATURE	CORE TEMPERATURE	COOKING TIME
Steam		212°F (100°C)	160°F (70°C)	25 minutes
Combination Steam		350°F (175°C)	160°F (70°C)	70 minutes
Convection		350°F (175°C)	160°F (70°C)	30 minutes
Retherm		275°F (135°C)	160°F (70°C)	5 minutes

OPERATING INSTRUCTIONS



STEAM MODE

The Steam mode provides the operator with the ability to steam, poach, or blanch. This mode will automatically steam at the boiling point of water; quick-steam above the boiling point for faster cooking results; or low temperature steam, below the boiling point, for more delicate products such as pâté, mousse, seafood, or custard.



PRESS ON BUTTON TO POWER OVEN ON.



Steam Mode

TOUCH THE STEAM MODE ICON.



TOUCH THE START ICON TO STEAM AT THE DISPLAYED SETTINGS.

TO CHANGE THE DISPLAYED SETTINGS:



TOUCH THE AREA TO THE RIGHT OF THE TEMPERATURE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

- Automatic Steaming 212°F (100°C)
- Quick Steaming 213°F to 250°F (101°C to 120°C)
- Low Temperature Steaming 85°F to 211°F (30°C to 99°C)

TO COOK BY TIME:



TOUCH THE AREA TO THE RIGHT OF THE TIME ICON.

TYPE IN DESIRED TIME OR SET CONTINUOUS TIME BY TOUCHING --:--.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

TO COOK BY PRODUCT CORE TEMPERATURE:



TOUCH THE AREA TO THE RIGHT OF THE PROBE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

INSERT PROBE INTO PRODUCT.

SET AVAILABLE AUXILIARY FUNCTIONS AS DESIRED, SUCH AS ENERGY LEVEL, FAN SPEED, MULTI-SHELF TIMER, ETC.



TOUCH THE START ICON TO BEGIN COOKING IN THE STEAM MODE.

- The cavity set-temperature will appear in the display.
- If cooking by probe, the actual internal product temperature will appear next to the **PROBE** icon during operation. To change the set value for core temperature, touch the temperature next to the **PROBE** icon and make changes as required.

When the cooking time has expired or the desired core temperature has been reached, an alarm will sound and handle light will flash several times indicating the end of the operating mode.



TOUCH THE RED STOP ICON TO STOP THE BUZZER OR OPEN THE OVEN DOOR.



NOTE: TO STOP COOKING PROGRAM AT ANY TIME, TOUCH THE RED STOP ICON.

CAUTION HOT

USE CAUTION WHEN OPENING THE OVEN DOOR WHEN THE COOKING CHAMBER IS HOT TO AVOID POSSIBLE BURNS.

OPERATING INSTRUCTIONS



STEAM MODE CHEF OPERATING TIPS

This mode will steam a full or partial load of a single product, or multiple products without transfer of flavors. When steaming multiple products, however, individual product cooking times must be taken into consideration. The

non-pressurized atmosphere of the Combitherm also provides the ability to open the door during the steam mode in order to monitor products more closely throughout the steaming process.

STEAM

Perforated, 2-1/2" deep pans (65mm) are particularly suitable for use in this program mode. These pans will provide a shorter cooking time and will prevent product over-cooking at the bottom of the pan.

Separate ice-encrusted vegetables before steaming to ensure even cooking.

A variety of products can be steamed at the same time but attention must be paid to the different cooking times required for each food product.

When cooking by probe, the probe must be inserted so that the tip is positioned in the center of the food mass. For liquid or semi-liquid foods, suspend the probe in the center of the product and secure the probe wire to the edge of the container.

HIGH TEMP STEAM

High temperature steaming is suitable for hearty, root-type vegetables such as potatoes, turnips, carrots, and cabbage.

High temperature steaming provides a cooking time which is approximately 10-percent shorter than the regular steam mode temperature of 212°F (100°C).

LOW TEMP STEAM

The low temperature steam mode will function whenever the oven compartment temperature is below 212°F (100°C).

It will take longer to steam products using the low temperature steam mode.

Steaming sausages in low temperature steam prevents cracked or peeling skins.

Use low temperature steam for delicate foods such as shrimp, fish, seafood, crème caramel, and sous vide.

For best results, low temperature steam all delicate food items at a temperature of 210°F (99°C) or below.

OPERATING INSTRUCTIONS



COMBINATION MODE

The Combination mode will prove to be the most versatile and widely used mode the Combitherm oven has to offer. It will produce the best possible results on the widest variety of products — all within the shortest period of time. The unique control function of this mode enables the operator to roast or bake with a combination of steam and convection heat. In addition to shorter cooking times, this combination of steam and heat offers less product shrinkage and more moisture retention than obtained in a convection oven.



PRESS ON BUTTON TO POWER OVEN ON.



Combination Mode

TOUCH THE COMBINATION MODE ICON.



TOUCH THE START ICON TO COOK AT THE DISPLAYED SETTINGS.

TO CHANGE THE DISPLAYED SETTINGS:



TOUCH THE AREA TO THE RIGHT OF THE TEMPERATURE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

- Cooking temperature range:
85°F to 575°F (30°C to 301°C)

TO COOK BY TIME:



TOUCH THE AREA TO THE RIGHT OF THE TIME ICON.

TYPE IN DESIRED TIME OR SET CONTINUOUS TIME BY TOUCHING ---:--.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

TO COOK BY PRODUCT CORE TEMPERATURE:



TOUCH THE AREA TO THE RIGHT OF THE PROBE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

INSERT PROBE INTO PRODUCT.

SET AVAILABLE AUXILIARY FUNCTIONS AS DESIRED, SUCH AS ENERGY LEVEL, FAN SPEED, MULTI-SHELF TIMER, STEAM INJECTION, ETC.



TOUCH THE START ICON TO BEGIN COOKING IN THE STEAM MODE.

- The cavity set-temperature will appear in the display.
- If cooking by probe, the actual internal product temperature will appear next to the **PROBE** icon during operation. To change the set value for core temperature, touch the temperature next to the **PROBE** icon and make changes as required.

When the cooking time has expired or the desired core temperature has been reached, an alarm will sound and handle light will flash several times indicating the end of the operating mode.



TOUCH THE RED STOP ICON TO STOP THE BUZZER OR OPEN THE OVEN DOOR.



NOTE: TO STOP COOKING PROGRAM AT ANY TIME, TOUCH THE RED STOP ICON.

CAUTION HOT

USE CAUTION WHEN OPENING THE OVEN DOOR WHEN THE COOKING CHAMBER IS HOT TO AVOID POSSIBLE BURNS.

OPERATING INSTRUCTIONS



COMBINATION MODE CHEF OPERATING TIPS

The Combination mode injects the optimum amount of steam automatically. There is no need to select humidity levels. Foods do not dry out. Flavors are retained with no transfer of flavors when mixing product loads.

Due to automatic steam adjustment, the door can be opened at any time during a cooking operation. Be certain to observe the safety warning when opening the oven door.

The Combination mode is particularly efficient when used for baking, broiling, grilling, stewing, braising, and roasting.

When using the Combination mode, cooking temperatures can be reduced 10- to 20-percent below the temperatures used for conventional cooking methods.

Cooking time will be reduced approximately 40-percent when cooking at the same temperature used for convection oven cooking and up to 50- to 60-percent less time when cooking at the same temperature used for a conventional oven.

Food browning in the Combitherm begins at a cooking temperature of approximately 250°F (120°C).

A higher cooking temperature results in heavier browning but also results in greater product weight loss. To achieve additional browning set humidity control into the product procedure. Humidity control is particularly useful for adding color to high moisture products such as chicken and other poultry items or for additional browning of full loads and other moist products.

The Combination mode provides even browning without the necessity to turn the pans.

For more even cooking, do not cook in pans deeper than 4" (100mm).

When cooking by probe, the probe must be inserted so that the tip is positioned in the center of the food mass. For liquid or semi-liquid foods, suspend the probe in the center of the product and secure the probe wire to the edge of the container.

OPERATING INSTRUCTIONS



CONVECTION MODE

The Convection mode operates with hot circulated air within a temperature range of 85°F to 575°F (30°C to 300°C). For many applications, better results may be achieved with the Combination mode; therefore, the operator may want to consider using the Convection mode on a more limited basis. The use of high temperatures (500-575°F) are not intended for continuous use.



PRESS ON BUTTON TO POWER OVEN ON.



Convection Mode

TOUCH THE CONVECTION MODE ICON.



TOUCH THE START ICON TO COOK AT THE DISPLAYED SETTINGS.

TO CHANGE THE DISPLAYED SETTINGS:



TOUCH THE AREA TO THE RIGHT OF THE TEMPERATURE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

- Cooking temperature range: 85°F to 575°F (30°C to 300°C)

TO COOK BY TIME:



TOUCH THE AREA TO THE RIGHT OF THE TIME ICON.

TYPE IN DESIRED TIME OR USE UP AND DOWN ARROWS TO ADJUST TEMPERATURE OR SET CONTINUOUS TIME BY TOUCHING --:--.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

TO COOK BY PRODUCT CORE TEMPERATURE:



TOUCH THE AREA TO THE RIGHT OF THE PROBE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

INSERT PROBE INTO PRODUCT.

SET AVAILABLE AUXILIARY FUNCTIONS AS DESIRED, SUCH AS ENERGY LEVEL, FAN SPEED, MULTI-SHELF TIMER, STEAM INJECTION, ETC.



TOUCH THE START ICON TO BEGIN COOKING IN THE STEAM MODE.

- The cavity set-temperature will appear in the display.
- If cooking by probe, the actual internal product temperature will appear next to the **PROBE** icon during operation. To change the set value for core temperature, touch the temperature next to the **PROBE** icon and make changes as required.



TOUCH STEAM INJECTION AT ANY TIME DURING COOKING. Steam will inject into the cavity as long as the icon is touched.

When the cooking time has expired or the desired core temperature has been reached, an alarm will sound and handle light will flash several times indicating the end of the operating mode.



TOUCH THE RED STOP ICON TO STOP THE BUZZER OR OPEN THE OVEN DOOR.



NOTE: TO STOP COOKING PROGRAM AT ANY TIME, TOUCH THE RED STOP ICON.

CAUTION HOT

USE CAUTION WHEN OPENING THE OVEN DOOR WHEN THE COOKING CHAMBER IS HOT TO AVOID POSSIBLE BURNS.

OPERATING INSTRUCTIONS



CONVECTION MODE CHEF OPERATING TIPS

The Convection Mode can be used to roast or bake products needing very short cooking times or for high moisture products such as muffins, cakes, and cookies, or for browning the surface of the food.

The Convection mode works best with low moisture foods or for very moist food which require a dryer finished product.

For baking, preheat the Combitherm at a temperature of 325°F to 375°F (163°C to 191°C). Once preheated, reset the temperature as required.

A higher cooking temperature results in heavier browning but also results in greater product weight loss. To achieve additional browning set the Humidity control into the product procedure.

When cooking by probe, the probe must be inserted so that the tip is positioned in the center of the food mass. For liquid or semi-liquid foods, suspend the probe in the center of the product and secure the probe wire to the edge of the container.

OPERATING INSTRUCTIONS



RE THERM MODE

The Retherm mode operates with hot circulated air within a temperature range of 245°F to 320°F (120°C to 160°C).



PRESS ON BUTTON TO POWER OVEN ON.



Retherm Mode

TOUCH THE RETHERM MODE ICON.



TOUCH THE START ICON TO RETHERM AT THE DISPLAYED SETTINGS.

TO CHANGE THE DISPLAYED SETTINGS:



TOUCH THE AREA TO THE RIGHT OF THE TEMPERATURE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

- Cooking or retherming temperature range: 245°F to 320°F (120°C to 160°C)

TO COOK BY TIME:



TOUCH THE AREA TO THE RIGHT OF THE TIME ICON.

TYPE IN DESIRED TIME OR SET CONTINUOUS TIME BY TOUCHING ---:--.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

TO COOK BY PRODUCT CORE TEMPERATURE:



TOUCH THE AREA TO THE RIGHT OF THE PROBE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

INSERT PROBE INTO PRODUCT.

SET AVAILABLE AUXILIARY FUNCTIONS AS DESIRED, SUCH AS ENERGY LEVEL, FAN SPEED, MULTI-SHELF TIMER, STEAM INJECTION, ETC.



TOUCH THE START ICON TO BEGIN COOKING IN THE STEAM MODE.

- The cavity set-temperature will appear in the display.
- If cooking or retherming by probe, the actual internal product temperature will appear next to the **PROBE** icon during operation. To change the set value for core temperature, touch the temperature next to the **PROBE** icon and make changes as required.



TOUCH STEAM INJECTION AT ANY TIME DURING COOKING. Steam will inject into the cavity as long as the icon is touched.

When the cooking time has expired or the desired core temperature has been reached, an alarm will sound and handle light will flash several times indicating the end of the operating mode.



TOUCH THE RED STOP ICON TO STOP THE BUZZER OR OPEN THE OVEN DOOR.



NOTE: TO STOP COOKING PROGRAM AT ANY TIME, TOUCH THE RED STOP ICON.

CAUTION HOT

USE CAUTION WHEN OPENING THE OVEN DOOR WHEN THE COOKING CHAMBER IS HOT TO AVOID POSSIBLE BURNS.

OPERATING INSTRUCTIONS



RE THERM MODE CHEF OPERATING TIPS

Since plated meals consist of dissimilar products, there are several important factors to consider in order to produce the finest results. Product density (compactness), thickness, quantity of product on each plate, and quantity of plates all relate to the length of time necessary to reheat. Again, experience is the best method to determine reheating time. Once the time has been determined and recorded for a specific meal, the results will be consistent for future reheating times.

HELPFUL HINTS FOR REHEATING ON THE PLATE

- All food components on the plate should be of similar densities and thickness.
- Arrange all food components evenly on the plate.
- Avoid excessive overlapping of product.
- Sauces must be heated and added to product after reheating.
- A mixed variety of meals can be reheated at the same time.

À LA CARTE RETHERMALIZATION

À la carte rethermalization is designed to take a single plate from a refrigerated temperature to serving temperature for immediate service. Plates are prepared in advance, covered, and refrigerated. Preheat the Combitherm oven. Remove plate from refrigeration and place in the oven at 275°F (135°C) for an uncovered plate or 300°F (150°C) for a covered plate. Plates with meat components will take more time than plates containing all vegetable components. Follow internal temperature requirements for reheating and allow for override time. After reheating, remove the plate from the oven, add any sauces, garnish, and serve. This process can be repeated as required.

For the most efficient continuous service, it is suggested that the Combitherm oven be dedicated to the rethermalization process during serving hours.

BANQUET RETHERMALIZATION

Banquet rethermalization is designed for high volume, full or partial load (multiple plate) reheating.

Plates are assembled in advance, covered, and refrigerated or loaded on the roll-in cart and refrigerated. Preheat the Combitherm oven at 275°F (135°C) for uncovered plates or 300°F (150°C) for covered plates. Remove plates or the roll-in cart from refrigeration, load in the oven and set timer as required. Follow internal temperature requirements for reheating and allow for override time. Remove the plates or roll-in cart from the Combitherm.

Placing our thermal blanket cover over the roll-in cart keeps food hot for 20 to 40 minutes, depending on the type of food, retherm temperature, and environmental factors. For longer holding times, roll the cart into the CombiMate® companion holding cabinet.

RE THERMALIZING PREFABRICATED AND VACUUM-PACKED FROZEN FOODS

For bulk product rethermalization, completely defrost product bags in walk-in cooler. **DO NOT REMOVE PRODUCT FROM THE BAG.** Load thawed bags in preheated oven and rethermalize in the Low Temperature Steam mode until the required internal temperature is reached. Place rethermalized bags in a preheated holding cabinet set at 140° to 165°F (60° to 74°C) until ready for service.

For large volume on-the-plate regeneration, defrost bags in walk-in cooler. Open bags and plate per menu requirements in a (maximum) 55°F (13°C) refrigerated room. Place on Alto-Shaam roll-in cart (trolley), and roll into Combitherm oven preheated at 275°F (135°C).

Regenerate in the Convection mode for 3 to 5 minutes. Switch to the Retherm mode for an additional 3 minutes or more if required. Placing our thermal blanket cover over the roll-in cart keeps food hot for 20 to 40 minutes, depending on the type of food, retherm temperature, and environmental factors. For longer holding times, roll the cart into the CombiMate® companion holding cabinet.

PLATE COVERS MUST BE USED FOR ON-THE-PLATE REGENERATION.

OPERATING INSTRUCTIONS



DELTA-T CORE TEMPERATURE COOKING MODE

This special program function cooks by internal product temperature with the use of the probe. The Delta-T cooking program increases the oven temperature in direct proportion to the internal temperature of the product, in contrast to the traditionally constant oven temperature. For example, the oven temperature will always be 100°F higher than the product itself. This slow cooking allows more time for enzymes to tenderize the meat. The Delta-T mode can be used with both convection and combination modes, providing a more gentle method of cooking. Browning occurs toward the end of the cooking cycle.



PRESS ON BUTTON TO POWER OVEN ON.



AVAILABLE IN CONVECTION MODE OR COMBINATION MODE, TOUCH THE DESIRED COOKING MODE ICON.



TOUCH THE AREA TO THE RIGHT OF THE PROBE ICON.

TYPE IN DESIRED FINAL INTERNAL PRODUCT TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

INSERT PROBE INTO PRODUCT.



TOUCH AUXILIARY FUNCTION DELTA-T ICON.

TYPE IN DESIRED DELTA-T TEMPERATURE.



TOUCH THE START ICON TO BEGIN COOKING.

- The actual internal product temperature will appear next to the **PROBE** icon during operation. To change the set value for core temperature, touch the temperature next to the **PROBE** icon and make changes as required.



TOUCH STEAM INJECTION AT ANY TIME DURING COOKING. Steam will inject into the cavity as long as the icon is touched.

When the operator-set internal temperature has been reached, an alarm will sound and handle light will flash several times indicating the end of the operating mode.



TOUCH THE RED STOP ICON TO STOP THE BUZZER OR OPEN THE OVEN DOOR.



NOTE: TO STOP COOKING PROGRAM AT ANY TIME, TOUCH THE RED STOP ICON

NOTE: CALIBRATE THE TOUCH OVEN PROBE

Fill a pitcher with blended ice and water and place inside the combi oven.

Snap probe in place at top of oven and insert probe into the pitcher of blended ice water.

With the CT PROformance oven "ON", touch the "Utilities" icon on the home page.

Touch the "Settings" icon.

Touch the ">" icon to advance to page 2 of the Settings screen.

Touch the "probe" icon on the Settings screen.

Once the temperature reading has stabilized, adjust setting to 32°F (0°C) using the + or - icons. Touch the "Home" icon to return to the home screen.

The control has now been calibrated to use the probe at appropriate temperatures.

CAUTION HOT

USE CAUTION WHEN OPENING THE OVEN DOOR WHEN THE COOKING CHAMBER IS HOT TO AVOID POSSIBLE BURNS.

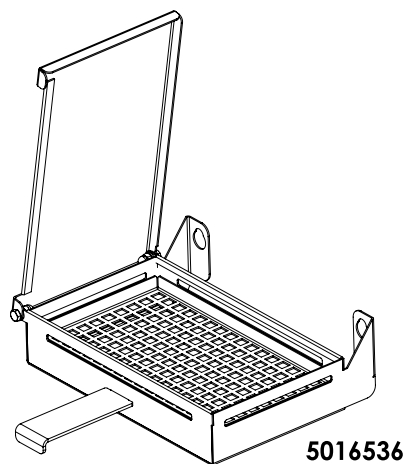
OPERATING INSTRUCTIONS

COMBISMOKER® PROCEDURES

LOAD WOOD CHIPS.

- Measure one container full of dry wood chips.
- Soak dry chips in water for 5 minutes.
- Shake excess water off wood chips.
- Place moistened chips back into the container and position the container securely on the two prongs located on the interior side panel of the oven.

A full container of wood chips will produce smoke for an approximate period of one to two hours depending on the cooking temperature being used for the selected product. The recommended Touch recipes have been tested to ensure complete product smoke penetration and full smoke flavor.



CHEF OPERATING TIP

Products such as ribs that require heavier smoke penetration to reach full smoke flavor should remain in the oven after cooking has been completed. Do not open the oven door.

Set the oven in the Low Temperature Steam Mode at 140° to 160°F (60° to 71°C) and allow the product to remain in the oven for a period of one hour.

If you would like assistance, you are invited to contact an Alto-Shaam corporate chef for recommendations.

NOTE: Always keep the oven door closed whenever operating the smoking function.

The CT PROformance CombiSmoker can be operated without using the smoking function. After using the oven as a smoker, however, it is necessary to clean the oven in order to prevent a transfer of smoke flavor to non-smoked products. Cleaning instructions are provided in this manual.

When smoking is completed, remove smoker box from oven. Dispose of wood chips in a fire proof waste receptacle.

AVAILABLE FROM ALTO-SHAAM

WOOD CHIPS

THE TOTAL WEIGHT OF WOOD CHIP BULK PACKS MAY VARY DUE TO HIGH MOISTURE CONTENT WHEN PACKAGED.

20 pound bulk packs

Apple	WC-22543
Hickory	WC-2829
Cherry	WC-22541
Sugar Maple	WC-22545



CAUTION

DO NOT OPEN THE OVEN DOOR DURING THE SMOKING FUNCTION. The introduction of outside air in the oven compartment may cause the wood chips to flame.



WARNING

THE USE OF IMPROPER MATERIALS FOR THE SMOKING FUNCTION COULD RESULT IN DAMAGE, HAZARD, EQUIPMENT FAILURE, OR COULD REDUCE THE OVERALL LIFE OF THE OVEN.

**DO NOT USE SAWDUST FOR SMOKING.
DO NOT USE WOOD CHIPS SMALLER THAN THUMBNAIL SIZE.**

OPERATING INSTRUCTIONS

COMBISMOKER® PROCEDURES

The ability to smoke product, hot or cold, is offered on all CTP models. The smoking function can be engaged in either the Combination mode or the Convection mode of operation. The smoking function cannot be operated when the oven is operating in the steam mode or the retherm mode.



PRESS ON BUTTON TO POWER OVEN ON.



TOUCH THE DESIRED COOKING MODE ICON, CONVECTION OR COMBINATION.

TO CHANGE THE DISPLAYED SETTINGS:



TOUCH THE AREA TO THE RIGHT OF THE TEMPERATURE ICON.

TYPE IN DESIRED TEMPERATURE.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

TO COOK BY TIME:



TOUCH THE AREA TO THE RIGHT OF THE TIME ICON.

TYPE IN DESIRED TIME.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

TO ACTIVATE COMBISMOKE:



TOUCH AUXILIARY FUNCTION SMOKING ICON.



TOUCH THE START ICON TO BEGIN SMOKING.

CAUTION



METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

COLD SMOKING PROCEDURES



TOUCH CONVECTION COOKING MODE ICON.

TO CHANGE THE DISPLAYED SETTINGS:



TOUCH THE COLD SMOKING ICON.

THE TEMPERATURE WILL DISPLAY -----°.

TO COOK BY TIME:



TOUCH THE AREA TO THE RIGHT OF THE TIME ICON.

TYPE IN DESIRED TIME.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

PLACE A PAN OF ICE ON A SHELF IMMEDIATELY BELOW THE PRODUCT.



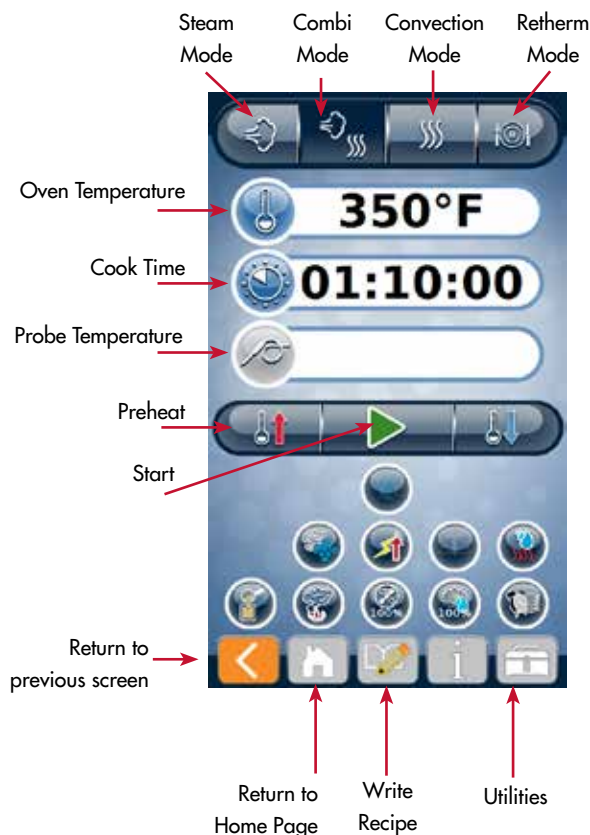
TOUCH THE START ICON TO BEGIN SMOKING.

CAUTION HOT

USE CAUTION WHEN OPENING THE OVEN DOOR WHEN THE COOKING CHAMBER IS HOT TO AVOID POSSIBLE BURNS.

OPERATING INSTRUCTIONS

RECIPE PROGRAMMING



To program a recipe

- While on the cooking mode screen, touch the **Write Recipe** key.
- Enter the preheat step, cook mode, temperature, time, and any auxiliary functions that may apply.
- For a single step recipe, touch the **Save** key.
- On multiple step recipes, touch the **Append** key after the step has been entered to advance to the next step.
- Enter the next cooking step (if applicable) or touch the **Cancel** key to prevent entering the next step.
- Touch the **Save** key when all steps have been written.
- A keypad will appear. Chose a photo or input the name of the recipe and touch the **Checkmark** key.



Auxiliary Function Icons



NOTE: EACH RECIPE CAN HAVE UP TO 10 SEQUENTIAL STEPS.

OPERATING INSTRUCTIONS

USING PROGRAMMED RECIPES



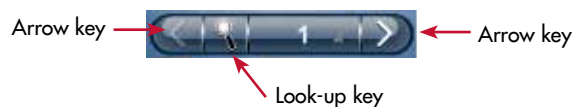
To cook with preprogrammed recipes

- Note: Some programs include the preheat function. Be sure the oven preheat temperature has been reached before loading food into the oven.

- Touch the **Cookbook** icon.



- Locate food item program by scrolling through pages using **arrow** keys or **Look-up** key.



- Touch preprogrammed food item icon.
- Oven begins operating automatically.



NOTE: TO STOP COOKING PROGRAM AT ANY TIME, TOUCH THE RED STOP ICON



OPERATING INSTRUCTIONS

EDITING PROGRAMMED RECIPES

The CT PROformance™ recipes that have been programmed can be edited, saved as a favorite recipe, and organized in folders or by time day they are used to help speed the search for specific recipes.

TO CHANGE SAVED RECIPES:



TOUCH RECIPE UTILITY ICON LOCATED AT THE BOTTOM OF THE RECIPE PAGE.

The recipe utility screen is bright red to indicate that the user is now in **EDIT MODE**.



TOUCH THE EDIT RECIPE ICON.

TOUCH THE ICON OF THE RECIPE TO BE EDITED.

The first cooking step of the recipe will be displayed. Change cooking mode, temperature, time, probe temperature, and /or any of the auxiliary functions.

If an additional step needs to be added, touch



Append to add next step



Change the previous step



Insert a step



Edit as necessary. When there are no further changes to be made, touch the Save icon.

ENTER THE NAME OF THE RECIPE IF IT IS TO BE CHANGED.



TOUCH THE GREEN CHECK MARK KEY TO CONFIRM CHANGE.

TO DELETE SAVED RECIPES:



TOUCH RECIPE UTILITY ICON LOCATED AT THE BOTTOM OF THE RECIPE PAGE.

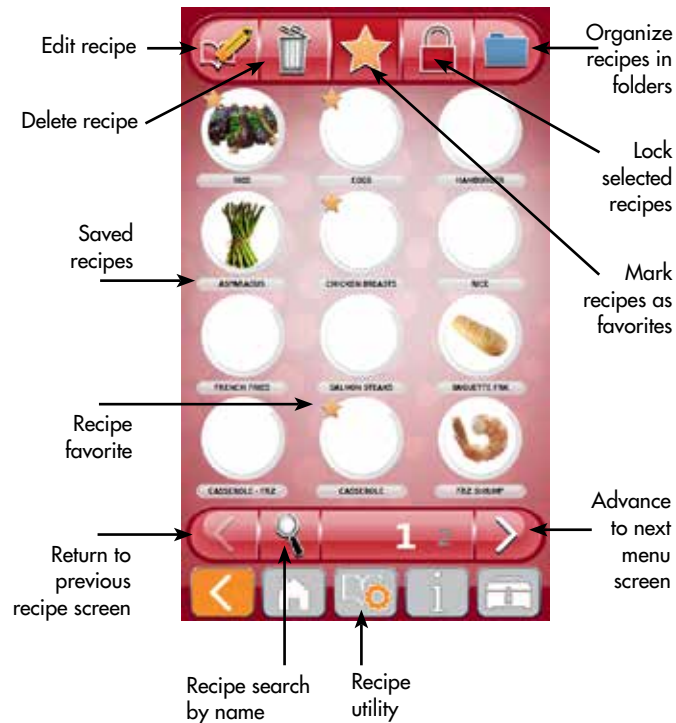
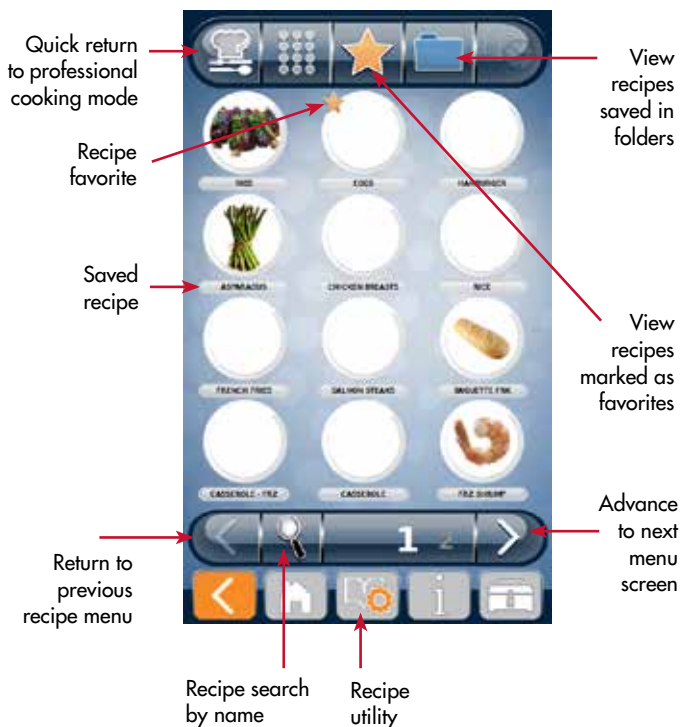
The recipe utility screen is bright red to indicate that the user is now in **EDIT MODE**.



TOUCH THE DELETE RECIPE ICON.

TOUCH THE ICON OF THE RECIPE TO BE DELETED.

The recipe will be removed from the screen.



NOTE: EACH RECIPE CAN HAVE UP TO 10 SEQUENTIAL STEPS.

(CONTINUED ON NEXT PAGE)

OPERATING INSTRUCTIONS

ORGANIZING PROGRAMMED RECIPES

The CT PROformance™ recipes that have been programmed can be organized in folders to help your kitchen staff be more productive.

TO CREATE A RECIPE FOLDER:



TOUCH THE FOLDER ICON LOCATED AT THE TOP OF THE RECIPE PAGE.

The recipe utility screen is bright red to indicate that the user is now in **EDIT MODE**.



TOUCH THE ADD FOLDER ICON.

The keyboard will appear - allowing you to enter in a name for the recipe folder.



TOUCH THE GREEN CHECK MARK TO CONFIRM THE FOLDER NAME.

Continue to add recipe folders as necessary.



TOUCH THE RECIPE UTILITY ICON TO ADD PROGRAMMED RECIPES TO THE FOLDER.



TOUCH THE FOLDER ICON ON THE RED BACKGROUND.

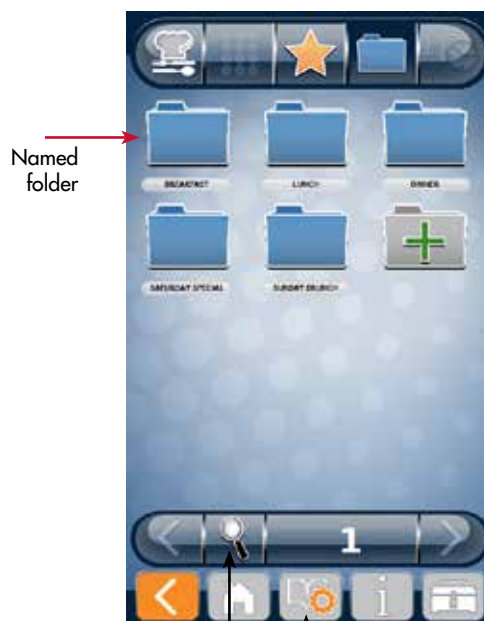
TOUCH THE NAMED FOLDER ICON TO REVEAL THE PROGRAMMED RECIPE CHOICES AVAILABLE.

TOUCH EACH OF THE PROGRAMMED RECIPES TO BE ADDED TO THE FOLDER.

A small blue folder will appear on the lower left of the recipe icon, indicating that it has been selected to be added to the recipe folder.



TOUCH THE RETURN TO PREVIOUS SCREEN ICON WHEN YOUR CHOICES HAVE BEEN COMPLETED.



Folder search
by name

Recipe
utility

Return to
previous screen



OPERATING INSTRUCTIONS

ORGANIZING PROGRAMMED RECIPES (CONTINUED FROM PREVIOUS PAGE)

TO MARK SAVED RECIPES AS A FAVORITE:



TOUCH THE FAVORITES RECIPE ICON.

TOUCH THE ICON OF THE RECIPE TO BE MARKED.

A gold star will appear at the top left of the recipe icon. All favorites can be viewed when you touch the gold star while viewing the list of saved recipes.

TO LOCK SAVED RECIPES:



TOUCH THE LOCK RECIPE ICON.

TOUCH A SINGLE ICON OF THE RECIPE OR A GROUP OF ICONS TO BE LOCKED.

A red lock will appear at the top right of the recipe icon.



OPERATING INSTRUCTIONS

HACCP ACCESS

The Combitherm CT PROformance™ oven meets the requirements of established HACCP criteria by providing automated sampling, record keeping, set-point validation, recipe used, dates and time. Data is captured when Core Temperature Probe cooking method is chosen. The information can be viewed on screen for verification or troubleshooting. This data is retained indefinitely - until the information is downloaded. Once downloaded, the information is removed from the ovens memory. Best practice would be to download the information every 30 days to a USB stick. This information can then be copied to your computer. The file format is text (.txt).

CAUTION: The CombiOven USB port is not recommended for use with personal hand held devices.

TO ACCESS THE DATA COLLECTED:



TOUCH UTILITIES ICON LOCATED ON THE HOME PAGE.



TOUCH THE UPLOAD/DOWNLOAD ICON.



TOUCH THE HACCP USB ICON.

The HACCP screen can help diagnose a problem or error code if limited information is available.

(next steps continued on next page)



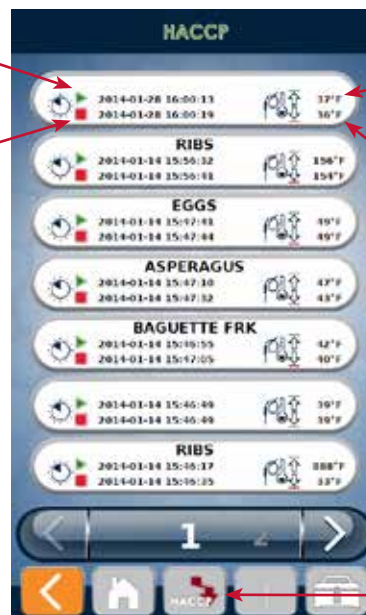
Utilities

Start time

Stop time

Highest probe temperature

Lowest probe temperature



Download

OPERATING INSTRUCTIONS

HACCP ACCESS AND DOWNLOAD



(steps continued from previous page)

TO DOWNLOAD THE DATA COLLECTED:

REMOVE THE CAP OF THE USB PORT ON THE OVEN.

INSERT THE USB STICK. If the USB stick is not recognized by the Combitherm oven, a question mark will appear on screen. Try again with another flash drive device or call Alto-Shaam Service.

When the data has made a successful transfer to the UB drive, the screen will change. See below.



TOUCH THE GREEN CHECK MARK KEY TO COMPLETE THE PROCESS.

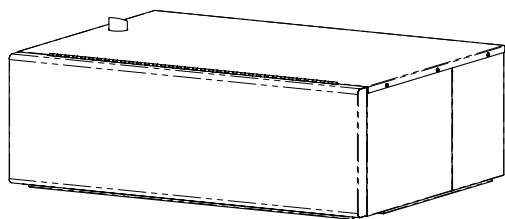
Remove the USB stick and replace the cap on the USB port on the oven.

UNIT ID	10/07/16/15/16:00				
IB	0.94	←			
CB	0.37	←			
DB	0.08	←			
					Firmware versions
RECIPE NAME	VEG BLANCH				
DATE	Time	PROGRAM NAME	COOK MODE	CAVITY SETPOINT (°F)	COOK TIME (hh:mm:ss)
10/31/2013	17:49:14	Preheat	Continuous	212	-=-
10/31/2013	17:59:27	Steam	Time	212	0:04:00
10/31/2013	18:00:27	Steam	Time	212	0:04:00
10/31/2013	18:01:28	Steam	Time	212	0:04:00
10/31/2013	18:02:29	Steam	Time	212	0:04:00
10/31/2013	18:03:29	Steam	Time	212	0:04:00
PROBE SETPOINT (°F)	Cavity Temperature (°F)	Core Temperature (°F)	Door Open	RECIPES STEP	
100	---	---	0	1	
110	---	---	0	2	
110	---	---	0	2	
110	---	---	0	2	
110	---	---	0	2	
110	---	---	0	2	

The download process will automatically create a folder on the USB stick titled "haccp". Each text file contains cooking program specifics and each function the oven performed.

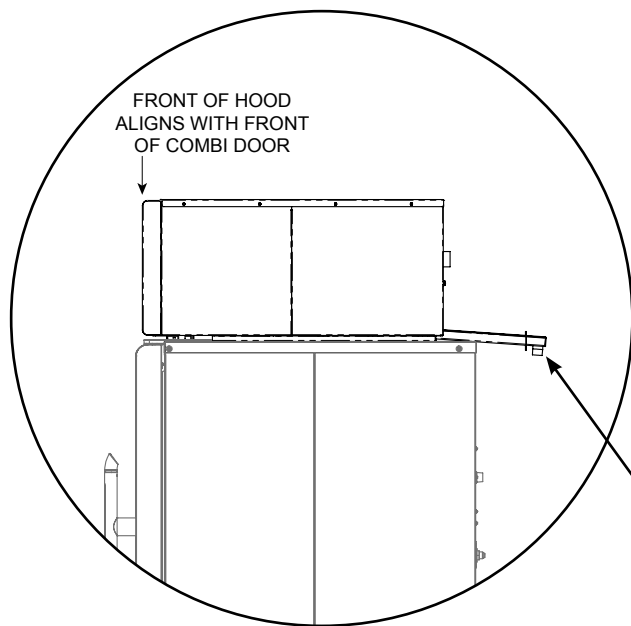
OPERATING INSTRUCTIONS

COMBIHOOD PLUS™ VENTLESS HOOD OPTION



The CombiHood PLUS option is factory installed directly on the top of the Alto-Shaam Combitherm CTP or CTC series oven.

- Using EPA method 202 testing, grease laden vapors emitted by the Combi Ventless hood are 0.58 mg/m^3 – far less than U.L.'s established standard of 5 mg/m^3 .
- Alto-Shaam's factory installed Ventless Hood is placed directly on the top of a Combitherm oven.
- A high-power fan captures all steam and fumes from the oven cavity into the hood intake and out the back surface exhaust vent, trapping grease as the air moves through the filter system.
- As fumes and vapors are circulated through the hood, condensed steam drains from a drain at the rear of the hood.
- An activated charcoal filter cleans the air before venting it out the top of the hood.
- CombihoodPLUS™ performance is "smart"; engaging the fan during the last minute of the cook mode which provides quiet operation and consumes less power.

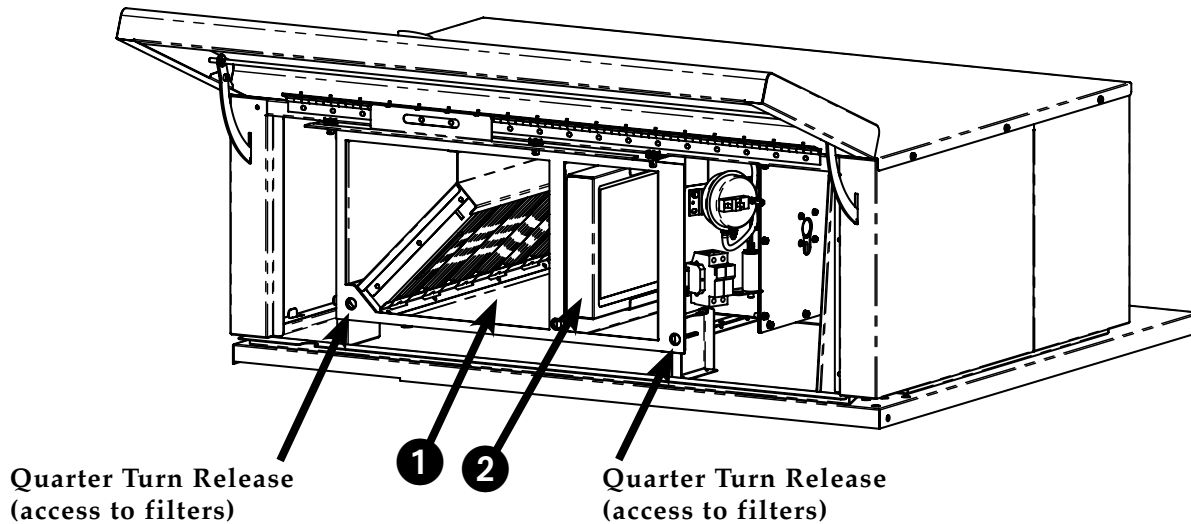


CONDENSATE DRAIN

A ventless hood condensate drain line to the floor drain must be installed. The 1/2" barbed connection is found at the back of the hood. The drain line must always be a positive gradient away from the Combitherm oven.

OPERATING INSTRUCTIONS

COMBIHOOD PLUS™ VENTLESS HOOD OPTION



① Grease Filter (FI-25867):

Cleaning frequency should be based on oven usage with a maximum of two weeks between cleaning if the oven is used for non-grease laden products or steam applications only. Grease laden products require cleaning frequency of at least once a week.

Remove the grease filter by pulling it straight out of the housing. Place the filter in the dishwasher or wash separately by placing in hot, soapy water until all grease and particles have been removed. Rinse thoroughly. Allow the filter to air dry before reinstalling.

To replace the grease filter, the air flow arrow on the filter casing should be pointing toward the hood fan.

② Charcoal Filter (Class I - FI-36620):

The charcoal filter should be inspected for contaminant's on a regular basis. Replacement must be made at a minimum of three month intervals — more often if heavy contaminant's are visible or if the filter no longer controls odors.

To remove the filter, pull and slide out while holding the bottom housing. When replacing the filter, make certain the air flow arrow(s) point toward the hood fan, and that the filter is replaced in the three-sided metal frame provided with the hood.

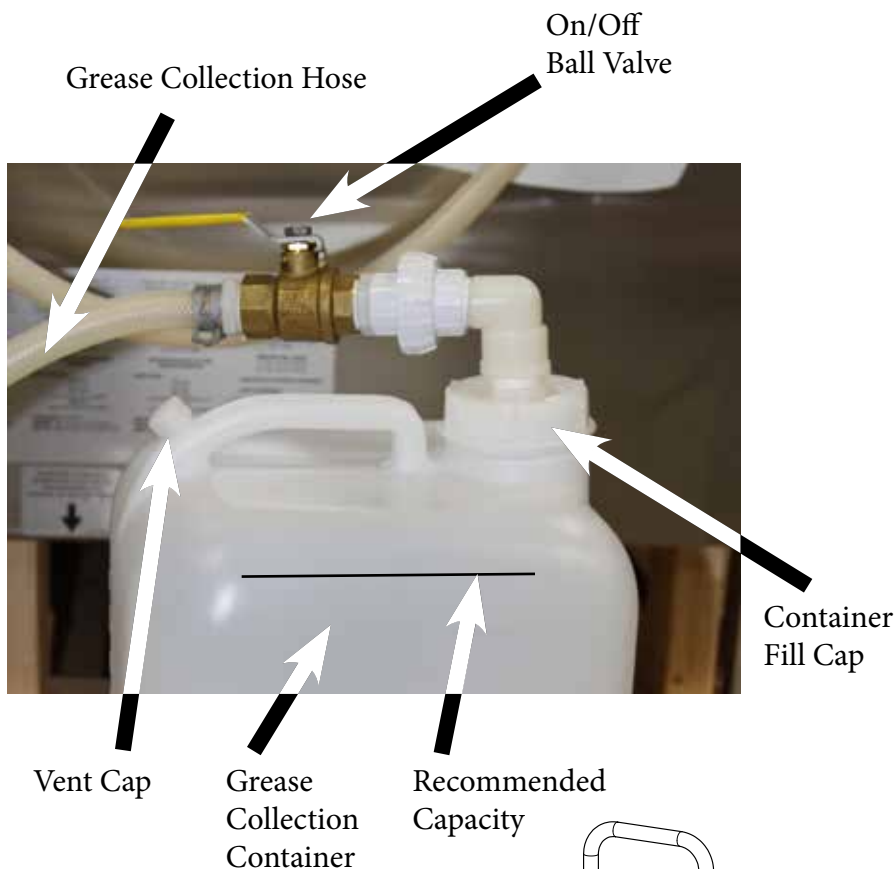
NOTE:

A pressure switch is used to detect when the airflow through the charcoal filter is reduced by 25% - indicating a possible blockage. This will generate an E101 error message on the oven control display. The filters will need to be cleaned or replaced.

If the filters are not seated properly, an error code E102 will appear on the oven control display at the end of a cooking cycle.

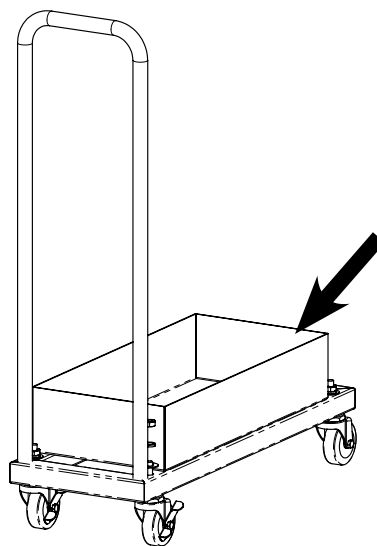
OPERATING INSTRUCTIONS

GREASE COLLECTION HOOK-UP (IF EQUIPPED WITH THIS FEATURE)



- Grease Collection Hose Assembly is attached to the oven in the back.
- Place Grease Collection Containers inside the tray of the Mobile Grease Collection Cart. Roll into place next to the oven.
- **Loosen vent cap on container.** Pull out the Grease Collection Hose Assembly from the back of the unit. Remove collection container fill cap.
- Screw Grease Collection Hose Assembly on to collection container until snug.
- Turn ball valve handle to the **ON** position.
- If this auxiliary function has been chosen while setting your cooking mode, the automatic grease collection system is electronically activated during the cooking process [PATENT PENDING]. It is designed to save labor and provide greater employee safety by eliminating the need to handle hot grease in shallow pans.

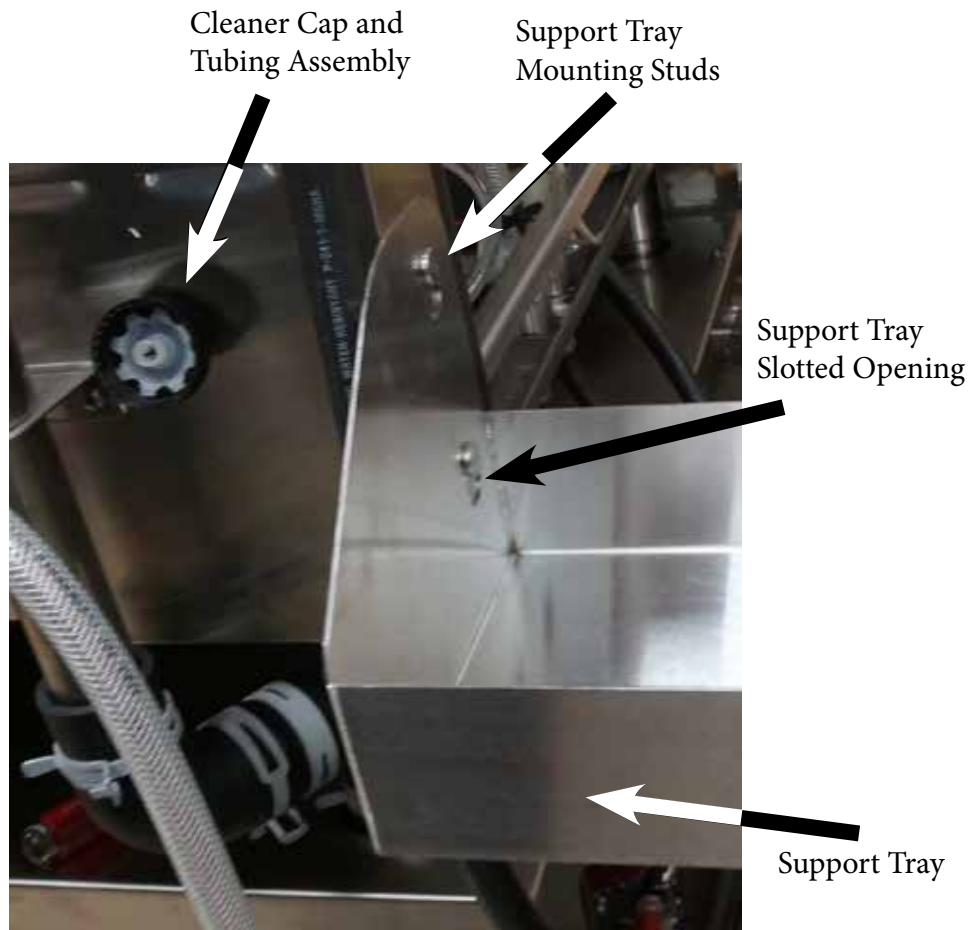
- Grease Collection container has a 5 gallon (19 liter) capacity and holds approximately 3 full loads of poultry grease.
- It is suggested to change the container when material reaches the fill line on the bottle or at 4 gallons to avoid hot grease overflow.
- Turn the ball valve handle to the OFF position.
- The ball valve handle must be in the OFF position when changing the collection container.
- Unscrew the container fill cap.
- Using a new container, screw Grease Collection Hose Assembly on to collection container until snug.
- Turn ball valve handle to the **ON** position.



Optional
Mobile
Grease
Collection
Cart

OPERATING INSTRUCTIONS

LIQUID CLEANER HOOK-UP (IF EQUIPPED WITH THIS OPTION)



- Removable, cleaner support tray can be mounted on the left or right exterior wall of the oven. Slide slotted openings on the tray over the mounting studs.
- Support tray holds a 2-1/2-gallon (9,5 liter) bottle and measures 10-1/2" x 7-3/4" (267mm x 194mm).
- Place liquid oven cleaner bottle inside tray.
- **Wearing protective rubber gloves and eye wear**, remove cap from liquid oven cleaner bottle. Pull out the Cleaner Cap and Tubing Assembly from the back of the unit screw on to liquid oven cleaner bottle.
- Combitherm liquid oven cleaner jugs are quickly and easily replaced.
- Combitherm liquid oven cleaner is automatically pumped through the system, saving labor and providing greater employee safety by eliminating the need to handle caustic cleaning liquids each day.



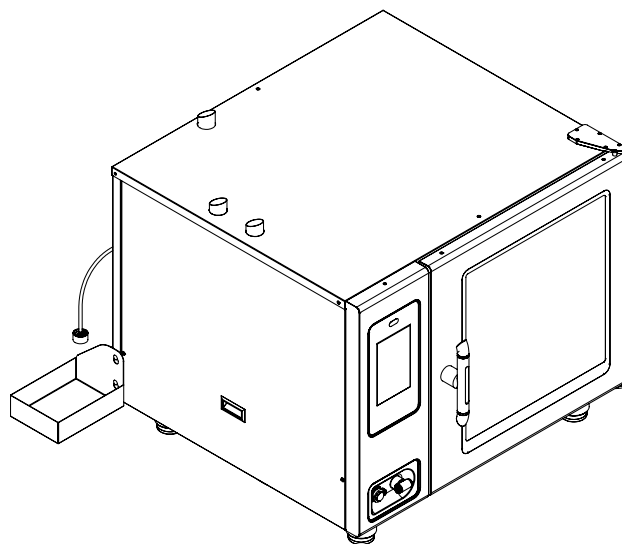
DANGER

PROTECTIVE EYE WEAR MUST BE WORN WHEN USING LIQUID OVEN CLEANER.


















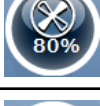



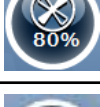


















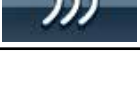
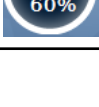


DANGER

RUBBER GLOVES MUST BE WORN WHEN USING LIQUID OVEN CLEANER.



RECIPE GUIDELINES


































BAKERY ITEMS

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Bakery (retherm)		275°F (135°C)		275°F (135°C)	4 minutes		--		
Brownies		325°F (163°C)		325°F (163°C)	25 minutes		--		
Cinnamon Rolls		350°F (177°C)		350°F (177°C)	6 minutes		--		
Cookies (not frozen)		325°F (163°C)		325°F (163°C)	12 minutes		--		
Croissants	Step 1	340°F (171°C)		340°F (171°C)	20 seconds		--		
	Step 2	--		340°F (171°C)	11 minutes		--		
Danish Pastry		340°F (171°C)		340°F (171°C)	11 minutes		--		
Dinner Rolls		350°F (177°C)		350°F (177°C)	10 minutes		--		
French Bread		350°F (177°C)		350°F (177°C)	16 minutes		--		
Fruit Pie		350°F (177°C)		350°F (177°C)	50 minutes		--		
Muffins		325°F (163°C)		325°F (163°C)	20 minutes		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES















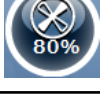



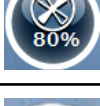






















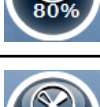


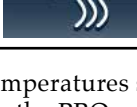
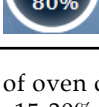


BAKERY ITEMS (CONTINUED)

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Par-baked Baguette (Frozen)	Step 1	450°F (232°C)		400°F (204°C)	2 minutes		--		
	Step 2	--		400°F (204°C)	20 seconds		--		
	Step 3	--		400°F (204°C)	7 minutes		--		
Par-baked Bread		350°F (177°C)		350°F (177°C)	10 minutes		--		
Par-baked Rolls		350°F (177°C)		350°F (177°C)	10 minutes		--		
Proofing		--		90°F (32°C)	30 minutes		--		
Puff Pastry		375°F (191°C)		375°F (191°C)	14 minutes		--		
Sheet Cake		325°F (163°C)		325°F (163°C)	20 minutes		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES










CONVENIENCE PRODUCT ITEMS

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Chicken Wings - Thawed		400°F (204°C)		400°F (204°C)	10 minutes		--		
Corn Dogs - Frozen		300°F (149°C)		300°F (149°C)	9 minutes		--		
Egg Rolls		375°F (191°C)		375°F (191°C)	15 minutes		--		
Entrée (4 lb frozen)		350°F (177°C)		300°F (149°C)	50 minutes		--		
Entrée (4 lb refrigerated)		350°F (177°C)		350°F (177°C)	Probe 165°F (74°C)		--		
French Fries - Frozen - 1/2" crinkle cut	Step 1	475°F (246°C)		375°F (191°C)	1 minute		--		
	Step 2	--		375°F (191°C)	9 minutes		--	--	
Hamburger Patties - Frozen		350°F (177°C)		350°F (177°C)	12 minutes		--		
Hamburger Patties - Precooked & Grilled		350°F (177°C)		350°F (177°C)	6 minutes		--		
Hamburger Patties - Thawed		350°F (177°C)		350°F (177°C)	5 minutes		--		
Mini Pizza 5"		350°F (177°C)		350°F (177°C)	10 minutes		--		
Pizza - Fresh		575°F (301°C)		550°F (288°C)	3 minutes 30 seconds		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES
































CONVENIENCE PRODUCT ITEMS (CONTINUED)

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Spring Rolls - Frozen		350°F (177°C)		350°F (177°C)	15 minutes		--		
Tater Tots		375°F (191°C)		375°F (191°C)	10 minutes		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES













































FISH & SEAFOOD ITEMS

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Baked Fish - Fresh		575°F (301°C)		550°F (288°C)	4 minutes		--		
Lobster - Whole		135°F (57°C)		195°F (91°C)	13 minutes		--		
Salmon - Cold Smoked	Step 1	--		-----	15 minutes				
	Rest	--	STANDBY	--	30 minutes	OFF	OFF	--	OFF
Salmon Filets		105°F (41°C)		145°F (63°C)	7 minutes		--		
Salmon Steaks		105°F (41°C)		145°F (63°C)	8 minutes		--		
Cold Smoked Shrimp - Pre-cooked		--		-----	10 minutes				
Shrimp - Frozen		118°F (48°C)		158°F (70°C)	12 minutes		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES






















MEAT RECIPES

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Bacon		318°F (159°C)		318°F (159°C)	15 minutes		--		
Beef Brisket - Smoked		250°F (121°C)		250°F (121°C)	Probe 180°F (82°C)				
Beef - Roasted (Prime Rib, Top Round, Tri-Tips, etc)		--	Combi Delta-T	125°F (52°C)	Probe 125°F (52°C)		--		
Breakfast Sausage Links		350°F (177°C)		350°F (177°C)	8 minutes		--		
Ham by Core Temp		--	Combi Delta-T	125°F (52°C)	Probe 150°F (66°C)		--		
Leg of Lamb by Core Temp		--	Combi Delta-T	125°F (52°C)	Probe 130°F (54°C)		--		
Meat Loaf by Core Temp		275°F (135°C)		275°F (135°C)	Probe 155°F (68°C)		--		
Pork - Back Ribs - Raw		250°F (121°C)		250°F (121°C)	1 hour 15 minutes		--		
Pork - Back Ribs - Smoked	Step 1	250°F (121°C)		250°F (121°C)	1 hour 15 minutes				
	Step 2	--		160°F (71°C)	Continuous		OFF		
Pork - Loin - by Core Temp		300°F (149°C)		300°F (149°C)	Probe 150°F (66°C)		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES



















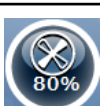


















MEAT RECIPES (CONTINUED)

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Pork Ribs Reheat		400°F (204°C)		400°F (204°C)	7 minutes		--		
Pork Shoulder - Smoked	Step 1	225°F (107°C)		225°F (107°C)	90 minutes				
	Step 2	--		225°F (107°C)	Probe 180°F (82°C)		OFF		
Rack of Lamb - by Core Temp		--	Combi Delta-T	122°F (50°C)	Probe 130°F (54°C)		--		
Sausage - Fresh		120°F (49°C)		160°F (71°C)	15 minutes		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES











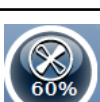



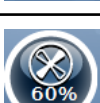

MISCELLANEOUS RECIPES

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Crème Brûlée		190°F (88°C)		190°F (88°C)	55 minutes		--		
Eggs - Hardboiled		212°F (100°C)		212°F (100°C)	12 minutes		--		
Eggs - Poached in Poaching Pan		130°F (54°C)		170°F (77°C)	10 minutes		--		
Eggs - Scrambled in bag: shake at 18 minutes		212°F (100°C)		212°F (100°C)	25 minutes		--		
Eggs - Scrambled in pan		212°F (100°C)		212°F (100°C)	15 minutes		--		
Eggs - Sous Vide		—		148°F (64°C)	60 minutes		--		
Pasta - Linguine or Spaghetti		212°F (100°C)		212°F (100°C)	20 minutes		--		
Rice		212°F (100°C)		212°F (100°C)	23 minutes		--		
Tamales		212°F (100°C)		212°F (100°C)	30 minutes		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES























POULTRY RECIPES

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Chicken - Patties	Step 1	350°F (177°C)		350°F (177°C)	4 minutes		--		
	Step 2	--		350°F (177°C)	5 minutes		--	--	
Chicken - Pieces		350°F (177°C)		350°F (177°C)	35 minutes		--		
Chicken - Oven Fried Pieces		450°F (232°C)		450°F (232°C)	18 minutes		--		
Chicken Pieces - MRB		350°F (177°C)		350°F (177°C)	28 minutes		--		
Chicken - Whole Roasted (full load)		575°F (301°C)		400°F (204°C)	Probe 175°F (79°C)		--		
Chicken - Whole Roasted (half load)		400°F (204°C)		400°F (204°C)	Probe 175°F (79°C)		--		
Chicken - Whole Smoked	Step 1	--		34°F (1°C)	15 minutes				
	Step 2	--		400°F (204°C)	Probe 175°F (79°C)		OFF		
Duck Whole - by Core Temp	Step 1	250°F (121°C)		250°F (121°C)	15 minutes		--		
	Step 2	--		300°F (149°C)	10 minutes		--		
	Step 3	--		300°F (149°C)	Probe 175°F (79°C)		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES










































POULTRY RECIPES (CONTINUED)

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Grilled Chicken Breasts		575°F (301°C)		465°F (240°C)	4 minutes		--		
Turkey Breast	Step 1	350°F (177°C)		250 - 350°F (135 - 177°C)	5 minutes		--		
	Step 2	--		250 - 350°F (135 - 177°C)	Probe 165°F (74°C)		--		
Turkey Breast - Smoked	Step 1	275°F (135°C)		275°F (135°C)	60 minutes				
	Step 2	--		275°F (135°C)	Probe 155°F (68°C)		OFF		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES














VEGETABLE RECIPES

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Asparagus - Fresh		150°F (66°C)		190°F (88°C)	3 minutes		--		
Asparagus - Roasted		575°F (301°C)		575°F (301°C)	5 minutes		--		
Broccoli, Cauliflower, Squash, Zucchini - Fresh		212°F (100°C)		212°F (100°C)	3 - 6 minutes		--		
Cabbage, Green Beans, - Fresh		212°F (100°C)		212°F (100°C)	8 -10 minutes		--		
Carrots - Fresh		225°F (107°C)		225°F (107°C)	10 minutes		--		
Cauliflower - Roasted	Step 1	575°F (301°C)		475°F (246°C)	4 minutes				
	Step 2	--		430°F (221°C)	5 minutes				
Corn-on-the-Cob - Fresh		212°F (100°C)		212°F (100°C)	14 minutes		--		
Frozen Vegetables		300°F (149°C)		220°F (104°C)	8 minutes		--		
Mushrooms - button - roasted	Toss with oil - place on sheet pan	575°F (301°C)		550°F (288°C)	10 minutes		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

RECIPE GUIDELINES

VEGETABLE RECIPES (CONTINUED)

RECIPE	STEP		COOKING MODE	COOK TEMP	TIME / PROBE	FAN SPEED	SMOKE	HUMIDITY LEVEL	POWER LEVEL
Potatoes, for mashed		225°F (107°C)		225°F (107°C)	30 minutes		--		
Potatoes, Red or Salad		212°F (100°C)		212°F (100°C)	30 minutes		--		
Potatoes, Roasted		500°F (260°C)		450°F (232°C)	18 minutes		--		

Note: Times & temperatures shown are for 50% - 80% of oven capacity.
Ovens not equipped with the PROpower™ option will require 15-20% additional time.

CLEANING & MAINTENANCE

MOBILE EQUIPMENT RESTRAINT FOR GAS MODELS

The gas Combitherm must use a connector that complies with *The Standard for Connectors for Movable Gas Appliances*, ANSI Z21.69 CSA 6.16 and addenda Z21.69a-1989. A quick disconnect device must be installed to comply with *The Standard for Quick Disconnect Devices for Use with Gas Fuel*, ANSI Z21 CSA 6.9. and European Standard EN203.

Adequate means must be provided to limit the movement of this appliance. Limitation of movement must be made without depending on the connector, the quick disconnect device, nor the associated piping designed to limit appliance movement. If it becomes necessary to disconnect the restraint, it must be reconnected immediately following the return of the appliance to its original position.

1. Install a manual gas shut-off valve along with an approved disconnect device.
2. Install an A.G.A. certified, heavy-duty connector that complies with ANSI Z 21.69 or CAN 1-6.10m88 along with a quick-disconnect device in compliance with ANSI Z21.41 or CAN 1-6.9m70. Connectors must be installed with a cable restraint to prevent excessive tension from being placed on the connector.

		WARNING
	RISK OF ELECTRIC SHOCK.	
	Appliance must be secured to building structure.	

MOBILE EQUIPMENT RESTRAINT FOR ELECTRIC MODELS

Any appliance that is not furnished with a power supply cord but includes a set of casters must be installed with a tether. Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. The following requirements apply:

1. Casters must be a maximum height of 6" (152mm).
2. Two of the casters must be the locking type.
3. Such mobile appliances or appliances on mobile stands must be installed with the use of a flexible connector secured to the building structure.

A mounting connector for a restraining device is located on the lower back flange of the appliance chassis or on an oven stand, approximately 18" (457mm) from the floor. A flexible connector is not supplied by nor is it available from the factory.

CAUTION

THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.

CLEANING & MAINTENANCE

COMBICLEAN® CLEANING AGENTS



DANGER

RUBBER GLOVES MUST BE WORN WHEN USING COMBICLEAN TABLETS OR SPRAY OVEN CLEANER.



DANGER

PROTECTIVE EYE WEAR MUST BE WORN WHEN USING SPRAY OVEN CLEANER.

NOTE: Use authorized Combitherm cleaner only.

Unauthorized cleaning agents may discolor or harm interior surfaces of the oven. Read and understand label and material safety data sheet before using the oven cleaner.

CAUTION: Causes eye, skin, and respiratory tract irritation. keep out of reach of children.

PRECAUTIONS:

- Do not take internally.
- Avoid contact with eyes and skin.
- Use rubber gloves when using this product.
- Wash hands thoroughly after handling.
- Avoid mixing with strong, concentrated acids.

FIRST AID:

Skin: Flush with water. Remove contaminated clothing and do not re-wear until washed. If irritation persists see a physician.

Eyes: Flush with water for 15 minutes. See a physician immediately.

Inhalation: If difficulty in breathing occurs, leave area immediately and do not return until dust is settled. If irritation persists, see a physician.

Ingestion: Drink large quantities of milk or water. DO NOT INDUCE VOMITING. See a physician immediately.

TABLET WILL BEGIN TO DISSOLVE ONTO SKIN IF HANDLED WITH DAMP OR WET HANDS.



RATING (0=none 4=extreme)
HMIS

HEALTH	2
FIRE	0
REACTIVITY	0
SPECIFIC HAZARD	none



Precautions:

Do not take internally. Avoid contact with eyes and skin. Use rubber gloves when using this product. Wash skin thoroughly after handling. Avoid mixing with strong, concentrated acids.

First Aid:

Skin: Flush skin with water. Remove contaminated clothing and do not wear again until washed. If irritation persists, see a physician.

Eyes: Flush eyes with water for 15 minutes. See a physician immediately.

Inhalation: If difficulty in breathing occurs, leave area immediately and do not return until dust is settled. If irritation persists, see a physician.

Ingestion: Drink large quantities of milk or water. DO NOT INDUCE VOMITING. See a physician immediately.

Keep out of reach of children.

Danger: CORROSIVE. May cause severe burns to eyes and skin.

Warnings:

- Unauthorized cleaning agents may discolor or harm interior surfaces of the oven.
- Read and understand label and material safety data sheet before using the oven cleaner.
- Always wear rubber gloves when handling.
- Tablet will begin to dissolve onto skin if handled with damp or wet hands.
- Cleaning agent causes burns to eyes, skin and mucous membranes.
- Do not get in eyes, on skin, or on clothing.
- Harmful if swallowed.
- Keep out of reach of children.
- Do not mix with anything but water.

Instructions:

- Remove all food scraps and residue from the oven drain and oven interior.
- Remove the smoker tray, if applicable.
- Ensure that the water is turned on for the oven.
- Allow oven to cool below 150°F (66°C).
- Wearing rubber gloves, remove oven interior drain screen at bottom of oven.
- Using the oven control, choose the cleaning level you would like to run.
- Tear open or cut open the plastic wrap surrounding the cleaning tablets.
- Remove tablets from the packaging and insert the appropriate number of cleaning tablets directly into the oven cavity drain.
- Replace drain screen and close oven door.
- Press the Start key or the Yes key, depending upon the oven model you have.
- Oven will begin the cleaning cycle and will beep when the cleaning cycle is completed.
- Leave door slightly ajar when cleaning is finished.



W164 N9221 Water Street • Menomonee Falls, WI 53052
(800)558-8744 (262)251-3800 Ext 6709 Fax: (262)251-7067

CLEANING & MAINTENANCE

PREVENTATIVE MAINTENANCE

In addition to the routine cleaning and maintenance procedures, there are several additional steps to be taken for both sanitation and to keep the oven running efficiently. These additional safeguards will help prevent down time and costly repairs.

DO NOT DISPOSE OF GREASE, FAT, WOOD CHIPS OR SOLID WASTE DOWN THE OVEN DRAIN.

Fats and solids will eventually coagulate in the drain system, causing blockage. Consequently, water will back-up into the condenser and interior oven compartment, resulting in an oven that is inoperable.

MAKE CERTAIN THE DRAIN SCREEN IS ALWAYS IN PLACE. REMOVE ANY SOLID WASTE MATERIAL FROM THE OVEN BOTTOM AND DRAIN SCREEN BEFORE IT ENTERS THE DRAIN SYSTEM.

The routine removal of solids from the drain screen will help prevent blockage.

USE THE AUTHORIZED COMBITHERM OVEN CLEANER ONLY.

The use of unauthorized cleaning agents may discolor or harm the interior surfaces of the oven.

When smoking is completed, remove smoker box from oven. Dispose of wood chips in a fire proof waste receptacle.

TO PROLONG THE LIFE OF THE DOOR GASKET, CLEAN THIS ITEM DAILY.

The acids and related compounds found in fat, particularly chicken fat, will weaken the composition of the gasket unless cleaned on a daily basis. Wipe with a hot, soapy cloth.

TO ADDITIONALLY PROTECT GASKET LIFE, ALLOW OVEN DOOR TO REMAIN SLIGHTLY OPEN AT THE END OF THE PRODUCTION DAY.

An open door will relieve the pressure on the door gasket.

ROUTINELY CLEAN DOOR HINGES.

Open oven door to relieve tension. Clean all parts of the hinge.

ON A MONTHLY BASIS, DECALCIFY OR DESCALE THE OVEN.

Using the Scale Free cleaner, CE-27889, place 7 ounces of the product in the drain. Run a **Heavy-Duty** cleaning cycle. After the cleaning cycle has been completed, use the hand shower to spray down the oven interior. Swing open the interior fan guard and spray down the area behind the panel. Direct a stream of water down the interior drain cover to thoroughly rinse the cleaner out of the oven. After the oven interior has been sprayed down, run a **RINSE** cleaning cycle.



DANGER



AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

CLEANING & MAINTENANCE

CLEANING AND PREVENTATIVE MAINTENANCE

PROTECTING STAINLESS STEEL SURFACES



It is important to guard against corrosion in the care of stainless steel surfaces. Harsh, corrosive, or inappropriate chemicals can completely destroy the protective surface layer of stainless steel. Abrasive pads, steel wool, or metal implements will abrade surfaces causing damage to this protective coating and will eventually result in areas of corrosion. Even water, particularly hard water that contains high to moderate concentrations of chloride, will cause oxidation and pitting that result in rust and corrosion. In addition, many acidic foods spilled and left to remain on metal surfaces are contributing factors that will corrode surfaces.





Proper cleaning agents, materials, and methods are vital to maintaining the appearance and life of this appliance. Spilled foods should be removed and the area wiped as soon as possible but at the very least, a minimum of once a day. Always thoroughly rinse surfaces after using a cleaning agent and wipe standing water as quickly

CLEANING AGENTS

Use non-abrasive cleaning products designed for use on stainless steel surfaces. Cleaning agents must be chloride-free compounds and must not contain quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel surfaces. Always use the proper cleaning agent at the manufacturer's recommended strength. Contact your local cleaning supplier for product recommendations.

CLEANING MATERIALS

The cleaning function can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods must be employed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches. Never use wire brushes, metal scouring pads, or scrapers to remove food residue.

 CAUTION	
  	TO PROTECT STAINLESS STEEL SURFACES, COMPLETELY AVOID THE USE OF ABRASIVE CLEANING COMPOUNDS, CHLORIDE BASED CLEANERS, OR CLEANERS CONTAINING QUATERNARY SALTS. NEVER USE HYDROCHLORIC ACID (MURIATIC ACID) ON STAINLESS STEEL. NEVER USE WIRE BRUSHES, METAL SCOURING PADS OR SCRAPERS.

CLEANING & MAINTENANCE

CLEANING SCHEDULE

DAILY GASKET CLEANING

It is important to prolong the life of the oven gasket by cleaning on a daily basis. Routine cleaning will help protect the gasket from deterioration caused by acidic foods.

1. Allow the oven to cool, then wipe the gasket and crevices with clean cloth soaked in warm detergent solution.
2. Wipe the gasket and crevices with a cloth and clean rinse water.

Do not attempt to remove gasket or place in the dishwasher.

PROBE USAGE AND CLEANING

After each use of the **CORE TEMP** mode, wipe the probe tip with a clean paper towel to remove food debris. Follow by wiping the probe with a disposable alcohol pad. Return the probe to the proper door bracket position.

Probe and Probe Prong Cleaning Procedures

1. Remove all food debris from probe between loads and at the end of each production shift. Wipe the entire probe, probe cable assembly, probe prongs, and probe holding bracket with a clean cloth and warm detergent solution.
2. Remove detergent by wiping the probe, cable, probe prongs, and bracket with a cloth and clean rinse water.
3. Wipe probe and probe bracket with disposable alcohol pad or sanitizing solution recommended for food contact surfaces.
4. Allow probe, probe prongs, and cable to air dry in the probe holding bracket.
5. Wipe the probe with a disposable alcohol pad prior to inserting into a new food product.

DAILY OVEN CLEANING

To be performed at the end of the production day or between production shifts.

ROLL-IN CART/FOOD TROLLEY CLEANING (ON EQUIPPED MODELS)

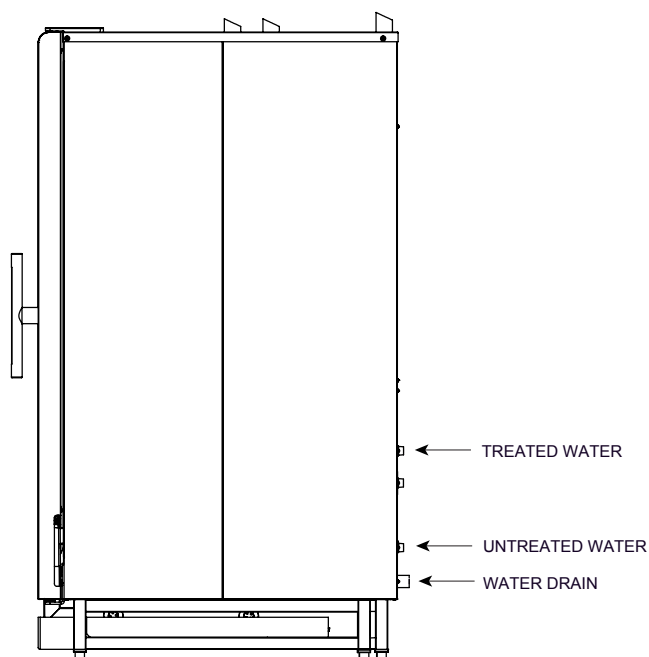
1. Remove food trolley to a cart wash area. Trolleys may be cleaned using any mild cleaning detergent and warm water.
2. Hand wipe all framing, slides, drip pan, and base. Thoroughly clean debris from the casters. A spray hose can be used for easier cart cleaning.
3. Remove detergent solution with warm water.
4. Wipe or spray with a sanitizing solution designed for use on metal and vinyl food contact surfaces.

5. Allow trolley to air dry.

As an alternative, trolleys can be cleaned while inside the oven. Allow the trolley to remain in the oven through the heavy-duty PLUS cleaning cycle, followed by steps 2 through 5.

MONTHLY CLEANING

1. Spray Head
2. Water Intake Filters
3. Drain Pipe
4. Decalcify (descale) Oven



DANGER



AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

CLEANING & MAINTENANCE

CT PROTOUCH™ WITH COMBICLEAN®

Five (5) cleaning levels are offered: rinse (20 minutes), light (30 minutes), normal (1 hour 20 minutes), heavy-duty (2 hours 6 minutes), and heavy-duty PLUS (3 hours 30 minutes) cleaning. CombiClean® 18 gram CombiTabs™ (CE-36354) or Combitherm® liquid spray cleaner (CE-24750) may be used. Side racks and shelves may remain inside oven during cleaning. Remove the smoker tray and any solid wastes from the drain screen and oven interior to prevent blockage.

Note: If a power outage were to occur during any of the cleaning cycles, the oven will begin a six (6) minute forced-rinse cycle.

Note: Be sure the water is turned on.



Touch the **Cleaning** icon found on the home screen.

If oven is too hot to proceed, the **Oven Too Hot** warning screen will appear. Open the oven door to allow the oven to cool below 150°F (66°C). When the oven is finished cooling, begin the cleaning procedure again.



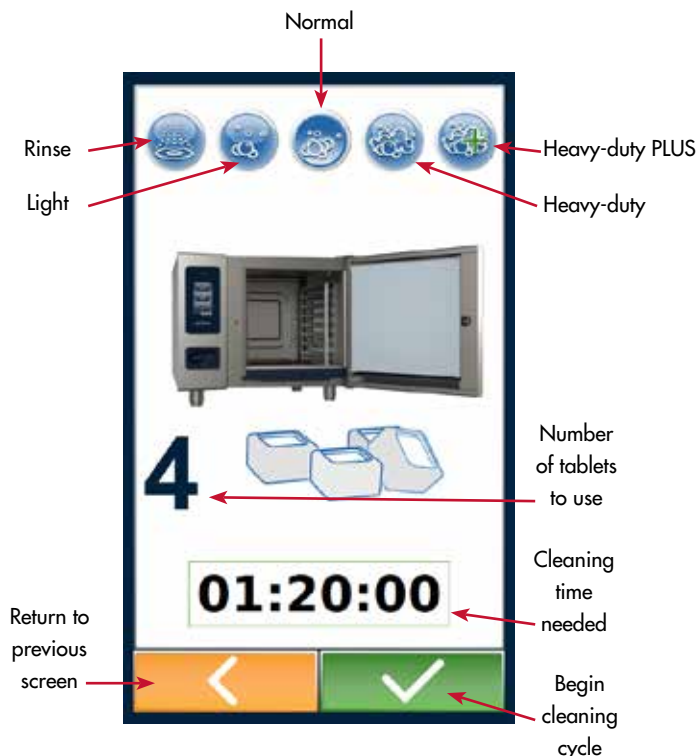
Select **Rinse, Light, Normal, Heavy-duty, or Heavy-duty PLUS** cleaning level.

- Wearing rubber gloves, remove oven interior drain cover screen.
- Tear open or cut open the plastic wrap surrounding the cleaning tablets.
- Remove tablets from the packaging. Discard packaging. Insert the appropriate number of CombiClean® CombiTabs™ directly into the oven cavity drain or spray CombiClean liquid cleaner inside the oven.
- Replace drain screen and close oven door.

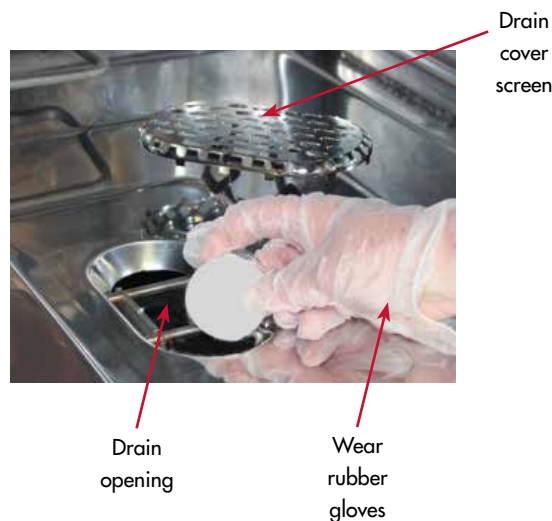


Touch the green check mark key to begin the cleaning cycle.

Oven beeps when it is done cleaning. Leave door slightly ajar when cleaning is finished.



Note: If the oven is equipped with the optional grease collection system, 3 cleaning levels are available.



Note: All tablets should be placed inside the drain as best as possible and drain screen replaced before starting the cleaning cycle. Tablets placed on top of the drain or placed on the bottom of the oven will not dissolve properly and will cause the oven interior to deteriorate.

TROUBLE SHOOTING

ERROR CODES

This section is provided for the assistance of qualified technicians only and is not intended for use by untrained or unauthorized service personnel. If your Alto-Shaam® unit is not operating properly, check the following before calling your Authorized Alto-Shaam Service Agent:

- ☛ Check that unit is receiving power. Circuit breaker turned on?

Do not attempt to repair or service the oven beyond this point. Contact Alto-Shaam for the nearest authorized service agent. Repairs made by any other service agents without prior authorization by Alto-Shaam will void the warranty on the unit.

When the oven malfunctions, an error code will appear in the display.



PRESS THE START ICON TO ACKNOWLEDGE THE ERROR.

When the oven error notification has been acknowledged, the Combitherm will attempt to return to normal operation.

Error Code	Error Call Out in Display	Description of Error	Possible Cause
E01	Low Water Boiler	Upper water level probe B1 is not satisfied within 5 minutes, after water solenoid valve Y1 is activated.	<ul style="list-style-type: none"> — Water supply is shut off. — Low water pressure. — Boiler drain cap is missing. — Boiler drain pump is defective. — Drain pump elbow leaking. — Water level probe has calcium build up. — Double water solenoid valve is defective (Y1). — Relay board, high voltage is defective.
E02	Control Temperature High	Low voltage relay board temperature higher than 176°F (80°C).	<ul style="list-style-type: none"> — Check wiring to all components listed below. — Cooling fan on relay board assembly is defective. — Cooling fan on display board assembly is defective. — Main cooling fan is defective. — Cooling fan on motor drive is defective.
E03	Fan Motor Error	Fan motor does not spin after 60 seconds, detected by the Hall Sensor. Error 03 does not appear if error E53 is detected first.	<ul style="list-style-type: none"> — Check wiring to all components listed below. — If LED on motor control flashes, see error codes for motor control. — Motor or fan wheel locked. — Hall sensor does not detect motor rotation. — Motor Thermo Temperature protection. — Fan wheel damaged.
E04	Lower Fan Motor Error	Lower Fan motor does not spin after 60 seconds, detected by the Hall Sensor. Error 04 does not appear if error E54 is detected first.	<ul style="list-style-type: none"> — Check wiring to all components mentioned below. — If LED on motor control flashes, see error codes for motor control. — Motor or fan wheel locked. — Hall sensor does not detect motor rotation. — Motor Thermo Temperature protection. — Fan wheel damaged.
E05	VFD Comm Failure	When VFD does not respond to a query on the CAN interface.	<ul style="list-style-type: none"> — Loss of power to VFD. — VFD malfunction. — CAN cable disconnected. — CAN address not correct on VFD.
E06	Lower VFD Comm Failure	When VFD does not respond to a query on the CAN interface.	<ul style="list-style-type: none"> — Loss of power to VFD. — VFD malfunction. — CAN cable disconnected. — CAN address not correct on VFD.

CONTINUED ON NEXT PAGE

TROUBLE SHOOTING

ERROR CODES

Error Code	Error Call Out in Display	Description of Error	Possible Cause
E07	Error Received from VFD	When VFD is flashing the green light	— Refer to VFD error code list and match to number of blinks on the green LED of VFD.
E08	Error Received from Lower VFD	When VFD is flashing the green light	— Refer to VFD error code list and match to number of blinks on the green LED of VFD.
E11	Convection Temperature High	In Combination program, cavity temperature N6 is measuring in excess of 572°F (300°C) for a minimum of 25 seconds In Convection program, cavity temperature N6 is measuring in excess of 572°F (300°C) for a minimum of 25 seconds	— Check wiring to all components mentioned below. — Steam element contactor locked/on. — N6 oven cavity temperature probe is defective. — N6 oven cavity temperature probe wires connected backwards — Relay board, high voltage, defective.
E13	Boiler Temperature High	Boiler temperature is more than 248°F (120°C) for more than 25 seconds, detected by B4 Probe	— Calcium build up in boiler — Check wiring to all components mentioned below. — Steam element contactor locked/on. — B4 boiler temperature probe is defective. — B4 probe wires connected backwards — Water level probe has calcium build up.
E15	Condensor Temperature High	Condensor water temperature is more than 212°F (100°C) for more than 180 seconds, detected by B3 probe	— Water supply is shut off. — Check wiring to all components mentioned below. — B3 condensor temperature probe is defective. — B3 condensor probe wires connected backwards — Single water solenoid valve defective (Y2). — Relay board, high voltage, defective.
E20	B11 Core Temperature Probe Single Point Fault	Single point core temperature probe defective or disconnected	— Clean probe receptacle pins with sand paper. — B11 Single Point Core Temperature probe with quick connect defective. — B11 Single Point Core Temperature probe wires with quick connect disconnected. — B11 Single Point Core Temperature probe receptacle defective. — B11 Single Point Core Temperature probe receptacle wires disconnected.
E21	N6 Cavity Probe Fault	Cavity temperature probe defective or disconnected	— N6 oven cavity temperature probe defective. — N6 oven cavity temperature probe wires.
E22	B10 Core Temperature Probe Multi-point Fault	Multipoint core temperature probe defective or disconnected	— B10 multipoint core temperature probe defective. — B10 multipoint core temperature probe wires disconnected.

CONTINUED ON NEXT PAGE

TROUBLE SHOOTING

ERROR CODES

Error Code	Error Call Out in Display	Description of Error	Possible Cause
E23	B4 Boiler Probe Fault	Boiler temperature probe defective or disconnected	— B4 boiler temperature probe defective. — B4 probe wires connected backwards.
E24	B5 Bypass Probe Fault	Bypass steam temperature probe defective or disconnected	— B5 bypass steam temperature probe defective. — B5 bypass steam temperature probe wires connected backwards.
E25	B3 Condensor Probe Fault	Condensor water temperature probe defective or disconnected.	— B3 condensor temperature probe defective. — B3 condensor probe wires connected backwards.
E26	N8 Boiler Safety Temperature Probe Fault	Boiler heating element protection probe defective or disconnected.	— N8 boiler temperature probe defective. — N8 probe wires connected backwards.
E27	Boiler Element Temperature High	Boiler protection heat element temperature detected by N8 probe is more than 266°F (130°C) for more than 25 seconds, or has reached 275°F (135°C).	— Calcium build up in boiler. — Check wiring to all components mentioned below. — Steam element contactor locked/on. — N8 boiler temperature probe defective. — N8 probe wires connected backwards. — Water level probe has calcium buildup.
E34	Steam Generator Drain Pump Fault	If water level does not drop below lower water level probe after three minutes when steam generator drain pump is activated in cleaning program.	— Calcium build up in steam generator drain pump. — Boiler drain pump defective. — Relay board, high voltage, defective. — Water level probe defective.
E36	Steam Temperature High	In Steam program, cavity temperature N6 is measuring in excess of 395°F (200°C) for more than 60 Seconds. In Combination program, cavity temperature N6 is measuring in excess of 520°F (270°C), for more than 60 Seconds. In Retherm program, cavity temperature N6 is measuring in excess of 395°F (200°C), for more than 60 Seconds. In Cleaning program, cavity temperature N6 is measuring in excess of 395°F (200°C), for more than 60 Seconds.	— Water supply is shut off. — Low water pressure. — Water injection pipe, calcium build up. — Water flow valve defect or calcium build up. — Double water solenoid valve defective (Y1). — Relay board, high voltage, defective.
E40	B3 Fault	B3 probe shorted to ground	— Defective or miswired probe.
E41	B4 Fault	B4 probe shorted to ground	— Defective or miswired probe.
E42	B5 Fault	B5 probe shorted to ground	— Defective or miswired probe.
E43	N6 Fault	N6 probe shorted to ground	— Defective or miswired probe.
E44	N8 Fault	N8 probe shorted to ground	— Defective or miswired probe.
E45	B10 Fault	B10 probe shorted to ground	— Defective or miswired probe.

CONTINUED ON NEXT PAGE

TROUBLE SHOOTING

ERROR CODES

Error Code	Error Call Out in Display	Description of Error	Possible Cause
E51	No Water In Boiler	Lower water level probe B2 is not satisfied within 5 minutes, after water solenoid valve Y1 is activated	<ul style="list-style-type: none"> — Water supply is shut off. — Low water pressure. — Boiler drain cap missing. — Boiler drain pump defective. — Drain pump elbow leaking. — Water level probe has calcium build up. — Double water solenoid valve defective (Y1). — Relay board, high voltage, defective.
E53	Fan Motor High Temperatures	Fan motor does not spin, result in over-heating, detected by motor coil safety thermo element. Temperature more than 320°F (160°C).	<ul style="list-style-type: none"> — Motor high limit open or wired incorrectly. — If LED on motor control flashes, see error codes for motor control. — Motor or fan wheel locked. — Fan wheel damaged.
E54	Lower Fan Motor High Temperature	Lower fan motor does not spin, result in over-heating, detected by motor coil safety thermo element. Temperature more than 320°F (160°C).	<ul style="list-style-type: none"> — Motor high limit open or wired incorrectly. — If LED on motor control flashes, see error codes for motor control. — Motor or fan wheel locked. — Fan wheel damaged.
E55	Vent Not Open	60 seconds after the venting motor is activated the vent motor safety switch did not open.	<ul style="list-style-type: none"> — Alignment issue between motor cam and vent motor safety switch (micro switch). — Faulty vent valve (motor). — Faulty vent valve safety switch (micro switch).
E56	Vent 2 not open	60 seconds after the venting motor is activated the vent motor safety switch did not open.	<ul style="list-style-type: none"> — Alignment issue between motor cam and vent motor safety switch (micro switch). — Faulty vent valve (motor). — Faulty vent valve safety switch (micro switch).
E57	No Rinse Water	Flow switch for solenoid valve Y4 does not detect any water flow for a minimum of 60 seconds.	<ul style="list-style-type: none"> — Water supply is shut off. — Low water pressure. — Flow switch is dirty or defective. — Double water solenoid valve defective (Y3). — Relay board, high voltage, defective.
E88	Lower Gas Ignition Failure	Reset output from Ignition Module is ON	<ul style="list-style-type: none"> — Hot surface ignitor not functioning. — No gas supply. — Flame sensor not functioning. — Faulty ignition control.
E89	Upper Gas Ignition Failure	Reset output from Ignition Module is ON	<ul style="list-style-type: none"> — Hot surface ignitor not functioning. — No gas supply. — Flame sensor not functioning. — Faulty ignition control.
E90	Lower Gas Combustion Blower Not at Speed	Speed is too slow.	<ul style="list-style-type: none"> — Power supply cable is not connected to blower motor. — Speed control cable is not connected to blower motor. — Blower motor is blocked, rotation is impeded, or motor is faulty. — Faulty control board.

CONTINUED ON NEXT PAGE

TROUBLE SHOOTING

ERROR CODES

Error Code	Error Call Out in Display	Description of Error	Possible Cause
E91	Upper Gas Blower Not at Speed	Speed is too slow.	<ul style="list-style-type: none"> — Power supply cable is not connected to blower motor — Speed control cable is not connected to blower motor — Blower motor is blocked, rotation is impeded, or motor is faulty — Faulty control board
E92	Communication Error CB does not properly respond	Twelve (12) instances of no-response from the relay board (CB) to the display board (IB).	<ul style="list-style-type: none"> — Check CAN cable connections mentioned below. — CAN cable defective. — Relay board, low voltage, connector defective. — Display board connector defective.
E94	Communication Error, TO Interface Board	No signal transfer for more than 5 seconds between the Interface Board (IB) and the Control Board (CB).	<ul style="list-style-type: none"> — Check CAN cable connections mentioned below. — CAN cable defective. — Relay board, low voltage, connector defective. — Display board connector defective.
E100	One or more maintenance reminder has timed out.	When any maintenance reminder has expired without action having been taken by the operator.	<ul style="list-style-type: none"> — Enter maintenance reminder screen and address the item that has timed out and reset
E101	Ventless Hood Fault - No Pressure	If the power switch or pressure switch is not closed.	<ul style="list-style-type: none"> — Check power switch is on. — Check vent motor is turning in the proper direction. — Pressure switch is mis-wired or defective. — Filter(s) require cleaning or replacement
E102	Ventless Hood Fault — Filters Not Present	If the air filter switches are not closed.	<ul style="list-style-type: none"> — Check filters are installed and properly seated. — Check filter switches are not damaged, defective or dislodged.
E103	Option Board Doesn't Send Switch Setting	OB not communicating its switch settings to the CB.	<ul style="list-style-type: none"> — Check CAN cable connection between OB and CB. — Ensure CB dip switch is set to see an OB. — Incompatible OB and CB software (update software). — OB defective. — CB defective.
E104	Option Board Not Communicating	Option board is not communicating with CB.	<ul style="list-style-type: none"> — Check option board CAN connection at CB and OB. — Defective OB. — Defective CB.
E105	No or Low Water Pressure	Water pressure switch not activated.	<ul style="list-style-type: none"> — Water supply not connected. — Water supply is shut off. — Water supply to unit blocked or obstructed — Faulty or miswired pressure switch
E106	Boiler Drain Pump Fault	Hall effect or rotational sensor is not sending a signal to the relay board	<ul style="list-style-type: none"> — Drain pump motor not running or defective. — Hall effect sensor broken or incorrectly wired. — Motor improperly wired.

CONTINUED ON NEXT PAGE

TROUBLE SHOOTING

ERROR CODES

Error Code	Error Call Out in Display	Description of Error	Possible Cause
E108	Cooling Fan Failure	If the temperature on the control board (relay board) is greater than 140°F (60°C) and less than 176°F (80°C). (See error code E02)	<ul style="list-style-type: none"> — Cooling fan damaged. — Cooling fan blocked or blades have been kept from rotating. — Incoming air temperature exceeds 100°F (38°C). — Air inlet has become blocked.
E109	High Limit Switch	The High Limit Switch input to the CB (N7) is “open”	<ul style="list-style-type: none"> — Unit has experienced an over heat condition. — Convection element contactors stuck closed. — Failed Y1 solenoid. — Obstruction between Y1 solenoid and injection pipe. — Improperly connected drain. — Condensate pan clean out not closed. — Improperly wired high limit switch at the switch or at the CB. — Defective high limit switch.
E200	The SD card has been detected to be larger than 2GB in size.	The SD card inserted is larger than 2GB in size.	<ul style="list-style-type: none"> — SD card is larger than 2GB in size. Contact service to order replacement SD card.

SEE MOTOR CONTROL ERROR CHART ON NEXT PAGE

TROUBLE SHOOTING

TOUCH MOTOR CONTROL ERROR CODES

Type of Error	Indication	Release of Error
Undervoltage	LED flashing sequence, with 1 flash per period.	Voltage of intermediate circuit is less than 250V
Overvoltage	LED flashing sequence, with 2 flashes per period.	Voltage of intermediate circuit exceeds 445V
Excess Temperature	LED flashing sequence, with 3 flashes per period.	Temperature sensor in the power unit is more than 199°F (93°C)
Current Peak	LED flashing sequence, with 4 flashes per period.	Blocked motor, detected by current peak monitoring from 900 rpm rotating field
Overcurrent	LED flashing sequence, with 5 flashes per period.	Intermediate circuit current exceeds 4.0 A
Short-circuit	LED flashing sequence, with 6 flashes per period.	Release of interrupt at intermediate circuit current larger than 53 A
Power on	LED flashing sequence, with 7 flashes per period.	Effective mains voltage does not correspond to jumper setting 115V/230V
Watchdog	LED flashing sequence, with 8 flashes per period.	Watchdog of the microcontroller released, program crash

ORIGINAL EQUIPMENT LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser that any original part that is found to be defective in Alto-Shaam, Inc. warrants to the original purchaser that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

The labor warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first. Alto-Shaam will bear normal labor charges performed by an authorized Alto-Shaam service agent during standard business hours, excluding overtime, holiday rates or any additional fees.

The parts warranty remains in effect for one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first. An optional extended warranty is available but must be purchased with the original equipment order. Please consult the factory for net pricing options and details.

THIS WARRANTY DOES NOT APPLY TO:

1. Replacement of wear parts, including light bulbs, door gaskets, and/or the replacement of glass due to damage of any kind.
2. Equipment damage caused by accident, shipping and handling, improper installation or alteration of any kind.
3. Equipment chassis or component/system damage as a result of inadequate routine maintenance and cleaning. Required maintenance and cleaning of steam generating equipment is the responsibility of the owner/operator.
4. Equipment used under conditions of abuse, neglect, misuse, carelessness or abnormal conditions including, but not limited to, equipment subjected to non-approved or inappropriate chemicals including, but not limited to, compounds containing chlorine, chlorides or quaternary salts, or equipment with missing or altered serial numbers. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Oven Cleaner including, but not limited to, damage due to chlorine, bleach, quaternary salts, souring powders or other harmful chemicals. Use of Alto-Shaam's Combitherm® Cleaner on Combitherm ovens is highly recommended.
5. It is the sole responsibility of the owner/operator/purchaser of this equipment to verify that the incoming water supply is comprehensively tested and if required, a means of "water treatment" provided that would meet compliance requirements with the published water quality standards published at right.
Non-compliance with these minimum standards will potentially damage this equipment and/or components and VOID the original equipment manufacturer's warranty. Alto-Shaam recommends using OptiPure® products to properly treat your water.
6. Any losses or damage resulting from malfunction, including loss of product or consequential or incidental damages of any kind.
7. Equipment damage resulting from modification in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

COMBITHERM WATER QUALITY MINIMUM STANDARDS

CONTAMINANT	INLET WATER REQUIREMENTS
Free Chlorine	Less than 0.1 ppm (mg/L)
Hardness	30-70 ppm
Chloride	Less than 30 ppm (mg/L)
pH	7.0 to 8.5
Silica	Less than 12 ppm (mg/L)
Total Dissolved Solids (tds)	50-125 ppm

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ALTO-SHAAM BE LIABLE FOR LOSS OF USE, LOSS OF REVENUE OR PROFIT, OR LOSS OF PRODUCT, OR FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.

WARRANTY EFFECTIVE **January 1, 2014**

TRANSPORTATION DAMAGE AND CLAIMS



All Alto-Shaam equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.
3. Note all damage to packages directly on the carrier's delivery receipt.
4. Make certain the driver signs this receipt. If he refuses to sign, make a notation of this refusal on the receipt.
5. If the driver refuses to allow inspection, write the following on the delivery receipt:

Driver refuses to allow inspection of containers for visible damage.

6. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of the time, date, and the person called.
7. Save any packages and packing material for further inspection by the carrier.
8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

RECORD THE MODEL AND SERIAL NUMBER OF THE APPLIANCE
FOR EASY REFERENCE. ALWAYS REFER TO BOTH MODEL AND SERIAL NUMBER
IN ANY CONTACT WITH ALTO-SHAAM REGARDING THIS APPLIANCE.

Model: _____

Serial Number: _____

Date Installed: _____

Voltage: _____

Purchased From: _____



Alto-Shaam has established a twenty-four hour emergency service call center to offer immediate customer access to a local authorized service agency outside of standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United States through the use of Alto-Shaam's toll-free number. Emergency service access is available seven days a week including holidays.

W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls , Wisconsin 53052-0450 • U.S.A.

PHONE: 262.251.3800 • 800.558-8744 USA/CANADA

FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY

www.alto-shaam.com

CT PROformance™ COMBITHERM®



Alto-Shaam World Headquarters
W164 N9221 Water Street, P.O. Box 450
Menomonee Falls, WI 53052-0450, U.S.A.
Toll Free Phone 800-558-8744
Phone 1-262-251-3800

Alto-Shaam Asia
Shanghai, China
Phone +86-21-6173 0336
400-611 6908

Alto-Shaam Canada
Concord, Ontario Canada
Toll Free Phone 866-577-4484
Phone 905-660-6781

Alto-Shaam Central & South America
Miami, FL USA
Phone 1-954-655 5727

Alto-Shaam France, L.L.C.
Aix en Provence, France
Phone +33(0)4-88-78-21-73

Alto-Shaam GmbH
Bochum, Germany
Phone +49(0)234-298798-0

Alto-Shaam Russia
Moscow, Russia
Phone +7-903-793-2331



www.alto-shaam.com | 800-558-8744 | 262-251-3800



Ecologically Smart.
Economically Smart.